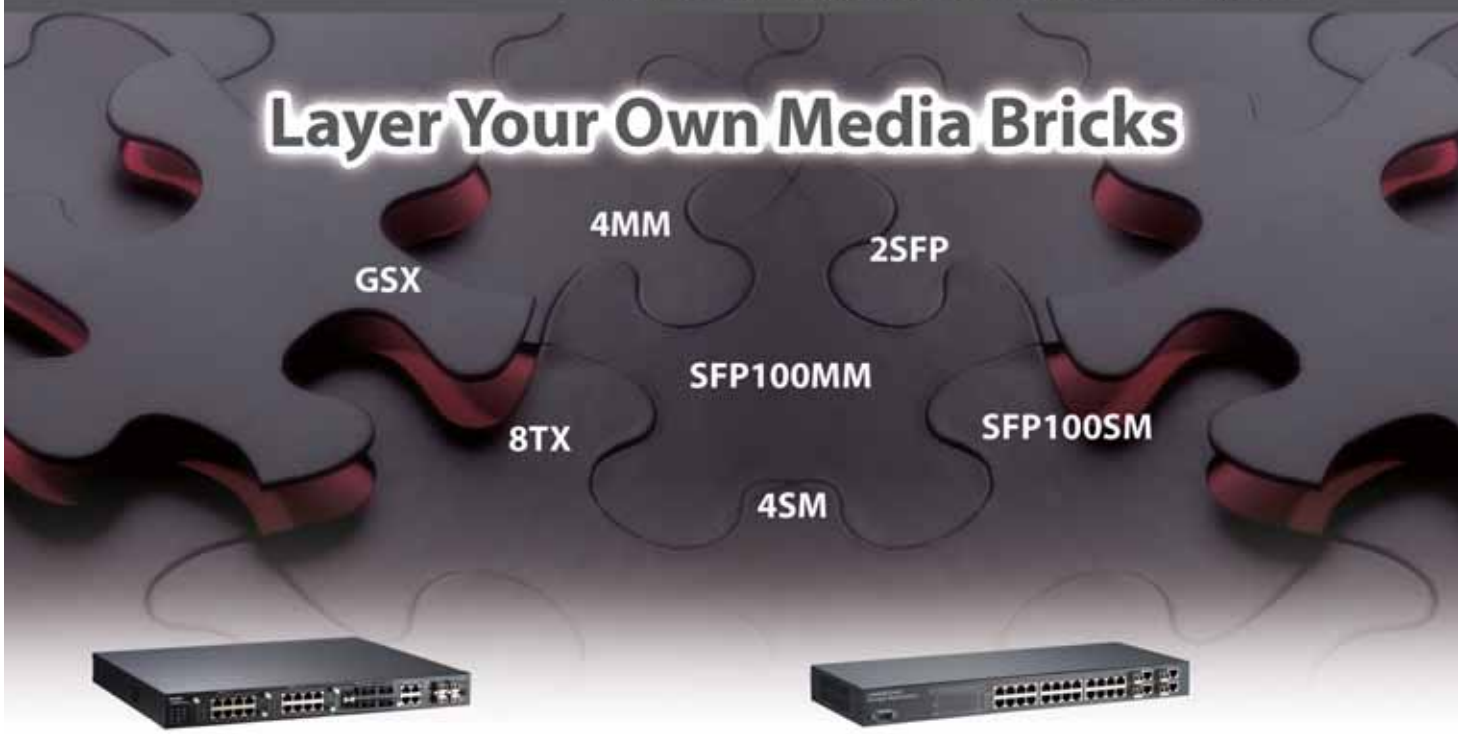
JETNET

Industrial Rackmount Ethernet Switch



JetNet 5628G
Industrial 24+4G Modular Managed Ethernet Switch

- 1U Rack-mount FAN-less Industrial Design and Intelligent Temperature Monitoring and FAN Control
- 24 10/100-TX and 4 Gigabit RJ-45/SFP Combo
- Modular Design with up to 18+4G Fiber Ports
- IEC61850-3, IEEE1613 Power Substation Applications
- RSTP and Multiple Super Ring (Rapid Dual Homing, MultiRing, TrunkRing™, RSR)
- Link Layer Discovery Protocol (LLDP), SNMP v3 and JetView Management
- 802.1x and Access Control List
- Dual AC 100-240V and DC 18-48V Power Inputs

JetNet 5228G
24+4G Rackmount Managed Ethernet Switch

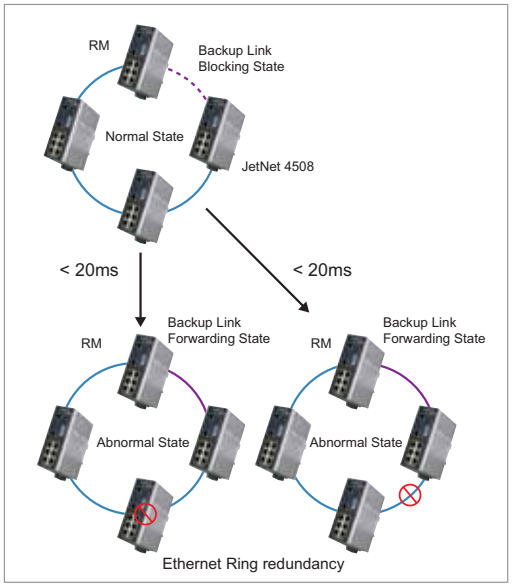
- 1U Rack-mount Fan-less Design
- 24 10/100-TX and 4 Gigabit RJ-45/SFP Combo
- Industrial Building and Control Room Applications
- 802.1s MSTP, Link Layer Discovery Protocol (LLDP)
- SNMP v3, SSL, SSH
- Advanced Security by Layer 2/4 Access Control List
- Protocol VLAN, Private VLAN and VLAN Stacking (QinQ) for Telecom Service
- AC 100-240V Power Input

JetNet Series Industrial Ethernet Switch

The JetNet Series offers a variety of state-of-art Rack Mount, Gigabit Combo, Managed and Unmanaged switches. This series meets and exceed all customers' needs, from cost-effective installation to value-added features, such as Rapid Super Ring, MultiRing™, TrunkRing™, Rapid Dual Homing (RDH™), -20~70°C wide range operating temperature for hazardous environment application, plentiful network management functions utility and many others.

Ethernet Ring Technology

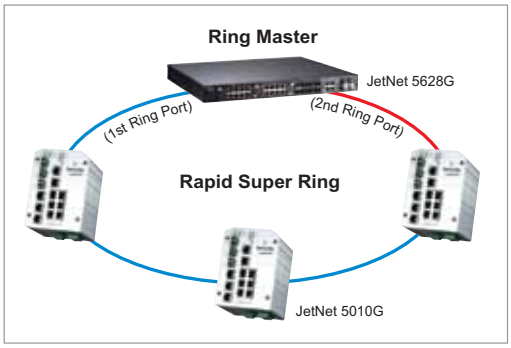
Network reliability is a primary consideration for industrial Ethernet environment. It is essential to recover network failure in a very fast manner that keeps the network running properly. Although STP/RSTP can recover a network failure, but its convergence time is not fast enough. A ring topology with well designed redundancy protocol makes fast recovery possible. Generally speaking, there will be a device in the ring topology acting as a redundancy manager, named RM in short, which chooses a link in the ring topology to be backup link and controls this link to block or forward network traffic. In Normal state, there is no failed device or link, RM blocks the backup link so that the ring can be logically regarded as a line topology. Traffics are transmitted on this line. Once if there is a failure on any of the devices or links which breaks the line into two segments-Abnormal state, RM soon recoveries the failure by changing the backup link into forwarding state to connect the two segments into a line, so that the traffic can keep transmitted without being effected.



Rapid Super Ring (RSR) Technology

Rapid Super Ring is the 2nd generation of Korenix Ring Redundancy technology. The recovery time is greatly improved from 300ms to few mini seconds for both copper and fiber ring. The Ring Master can be auto-selected by the RSR engine. The 1st Ring Port of the R.M. is the primary path while the 2nd Ring Port of the R.M. is the block path. Once the primary path fails, the 2nd path will be recovered within few mini seconds.

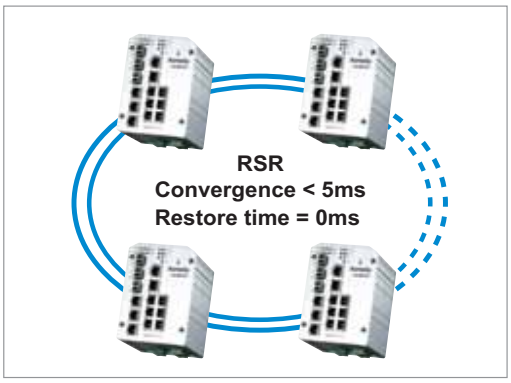
Besides, the restore time is also shortened to zero in the R.M. auto-selection mode.



Comprehensive Redundant Solutions — Multiple Super Ring (MSR™)

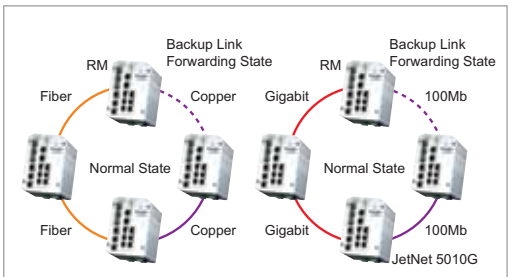
The JetNet series supports MSR™ (Multiple Super Ring); the next new generation of RSR (Rapid Super Ring) Ring technology. This new technologies is perfect for different network redundancy applications and structures. With the MSR™ technology, a node can be configured to multiple rings with the failover time in as little as 5ms and ZERO-second of restore time. In addition, users can extend the ring topology by adding hundreds of JetNet series to meet the network needs without compromising the speed of the network. The MSR™ also facilitates the JetNet series to connect with core management switch via standard Rapid Spanning Tree Protocol or through multiple paths or nodes to increase the reliability by Rapid Dual Homing (RDH™) Technology. By integrating MSR™ and Link Aggregation Control Protocol (LACP) the JetNet series can enhance the link availability and increase the overall link capacity. Two or more Fast Ethernet connection are bundled in order to increase the bandwidth and to create a resilient and redundant link.





Hybrid Link Media and Speed Supported

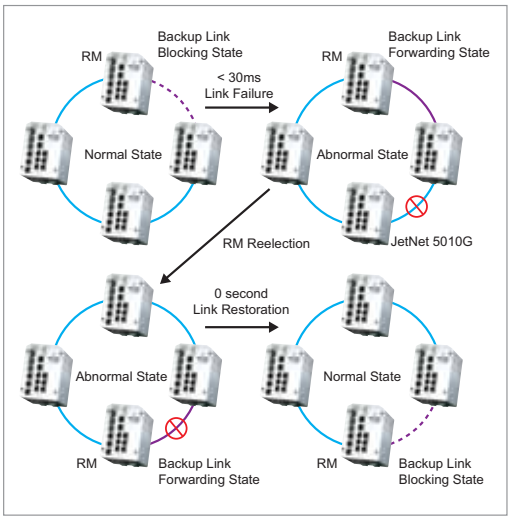
The Rapid Super Ring technology is link media and speed independent. You can setup hybrid link media and speed on a device of a ring. In the left figure of below, the ring ports of the ring are fiber and copper hybrid. In the right figure of below, the ring ports of the ring are gigabit and 100Mb hybrid, even 10Mb can be supported.



Hybrid link media and speed

Seamless Ring Port Restoration™

Seamless restoration is a new Korenix patented technology which can restore a failed (in Abnormal state) ring without causing any loop problem, topology change, packet loss, and restoration time.
Upon link failure or node failure, RM receives link down message and forward it's blocking port immediately. Afterward, RM election process restarts and a new RM which is at one of the broken edge is elected. Since RM is located at the broken edge, it can block the port at once upon the failed link restored and then send a WATCHDOG to check the ring state. If the result is Normal state, it simply does nothing. In addition, it forwards the port and set the ring state to Abnormal state. This makes a perfect restoration that will not result in any loop, topology change and restoration time (restoration time = 0 second).



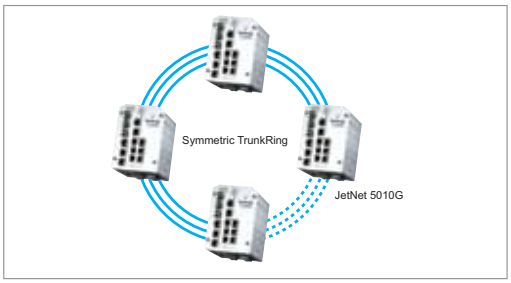
Link Redundancy

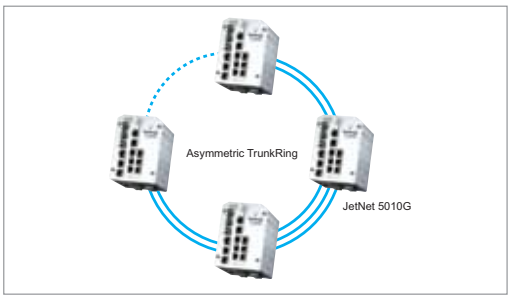
The Link Aggregation can setup several links as a single port. Link Aggregation is a known way to transfer much more data than one single port can deliver. But the Link Aggregation originally was developed to provide redundancy not bandwidth benefits. It still works, even if only one link of Link Aggregation Group is up. The Link Aggregation can either be set up statically or by using the Link Aggregation Control Protocol (LACP). If you want to protect an important link, you can setup a Link Aggregation Group between two managed switches.

TrunkRing™

Symmetric TrunkRing™ Asymmetric TrunkRing™

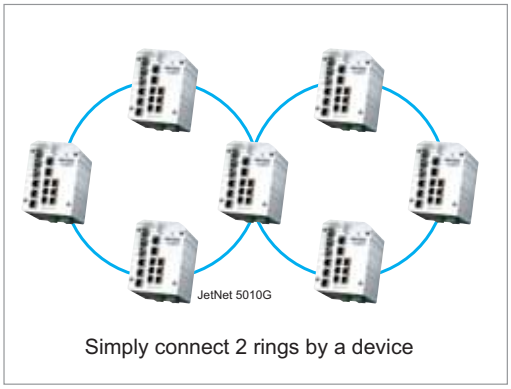
TrunkRing™ is a new feature in MSR™ which merges the two technologies of RSR and link aggregation. It takes advantage of aggregation to enhance the link redundancy, while increasing the link speed. The ring will open only if all the aggregated links are broken. Link aggregation can be achieved by either, static trunk or LACP protocol. Not all the link sections in a TrunkRing™ need to be the same. Ring links can be either symmetric or asymmetric. Some are single links, and the others are aggregated by links where the number of links in a trunk group can be different. Users can enhance the link redundancy at different locations in accordance to the need. And the link with lower speed is more likely to be used as the backup path for restoring the network to full play capacity.



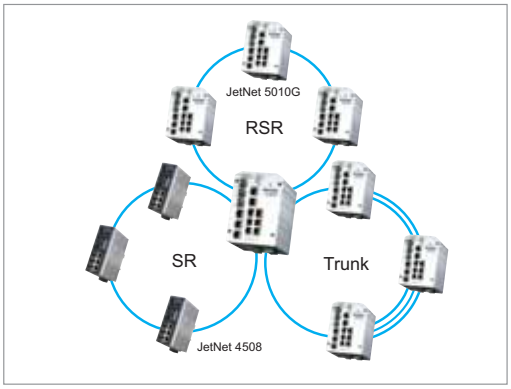


MultiRing™

MultiRing™ provides easier connectivity between two ring networks. The simplest example is to connect two rings by a single device. Depending on the number of ports, a device can even gather multiple rings together. As shown in the figure, MultiRing™ technology simply extends the network topology by linking multiple rings into a line or into multiple directions. In addition to extensibility, MultiRing™ has great diversity of various ring technologies. With MultiRing™ enabled, a device can connect RSR rings, TrunkRing™ and a ring of Super Ring together, which provides extensibility to new technologies while keeps the great backward compatibility.



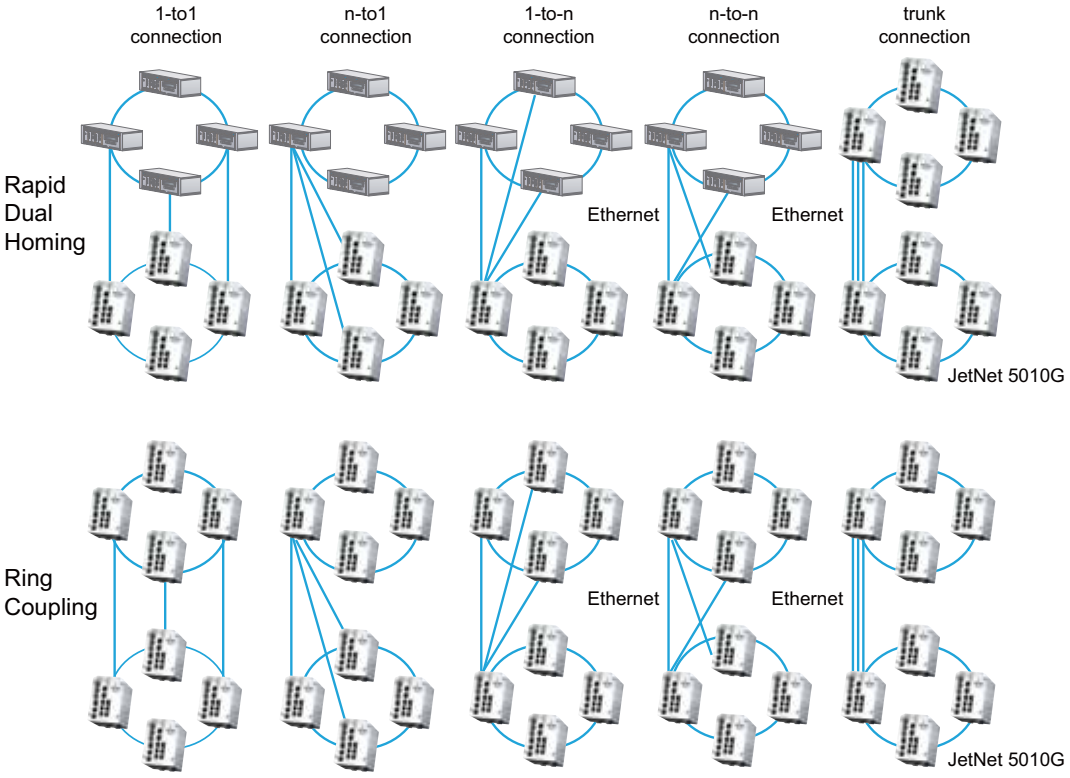
Simply connect 2 rings by a device



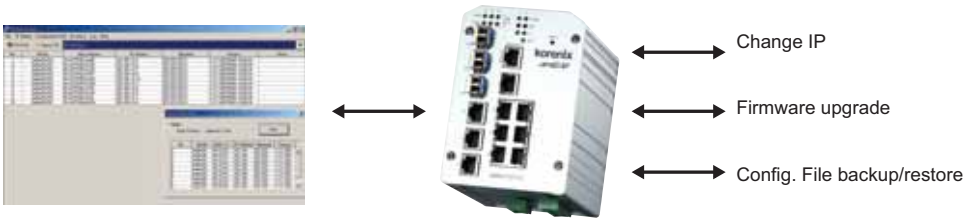
Rapid Dual Homing (RDH™) Technology

Rapid Dual Homing (RDH™) replaces DualHoming II and can be used for ring coupling. While keeping easy configuration and multiple redundancies, the failover time is much faster (less than 50 ms) and the restore time is ZERO (seamless restoration). Uplinks can be auto detected and gathered into groups. In each group, uplinks are sorted into Primary, Secondary, and Standbys by their link speed.

The uplink with the highest speed is more likely to be the active path for data transmission. Link aggregation is also integrated into RDH™. An uplink can be a link or several links aggregated as a trunk, which provides better redundancy and link capacity.



Plentiful Network Management Functions Utility — JetView



JetView adopts a client/server architecture. Users may use a client application to issue the operations and the device server executes the operations. The major difference between the JetView and other management tools, ex. Web, CLI, and SNMP, is that the JetView can configure several devices at the same time. Imagine utilizing Web or CLI or SNMP to change an IP address or upgrade firmware on over 30 devices simultaneously, this can be seriously inconvenient. JetView makes this task virtually effortless! This utility supports auto discovery, group IP settings, group firmware upgrade, and group configuration file backup/restore. Also, JetView can be compatible with various operating systems, ex. Windows 95/98/ME, 2000, XP, and Linux.

Flexibility — 100 / 1000Mbps SFP / Combo Ports

The combo ports design adds superb flexibility and convenience for expand the link over fiber optics. These ports support several different types of 10/100MM SFP modules, from 2KM multimode to 120KM single mode. The combo ports also make the port configuration easy, such as 8 RJ45 ports and 2 fiber ports, or 9 RJ45 ports and 1 fiber port.



Applications

Coal Mine Monitoring System

Reliable Network Monitoring System



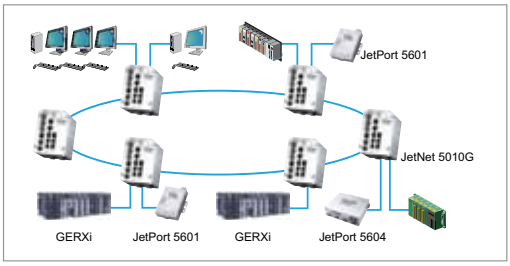
Coal mining is an efficient resource of energy and is used as a low cost, quality fuel for many power plants. Mining operations are being equipped with sophisticated industrial controls and sensors for safety and operations efficiency. In mining applications, reliable communication between many wide spread localizations and large bandwidth equipments are required. A well-known Coal Mine located in Silesia, Poland, has chosen Korenix JetNet 5010G for data transmissions which needed to be done in a reliable and effective manner. JetNet 5010G comes with Rapid Super Ring Redundancy Management functions as well as many other cutting edge technologies in software and hardware that makes it well-qualified for Coal Mining's mission critical requirements. JetNet 5010G was chosen and implemented for various reasons; one which is its flexibility. JetNet 5010G comes with 3 RJ-45/SFP combos for flexible networking distances from 100-Meter Cat-5 cable to 70-KM Single-mode fibers. In addition, JetNet 5010G's Rapid Super Ring has 5 ms of recovery time for redundancy as well as Gigabit Ethernet - to ensure future net efficiency. In addition, they are also using Korenix's serial device JetPort 5604i because of its easy way to connect serial devices (i.e. tape loaders). The use of Korenix's Ethernet products in the mining industry has provided the customer with safe mining operations.

Main Products

- JetNet 5010G Industrial 7+3G-port Gigabit Managed Ethernet Switch
- JetPort 5604 Industrial 4-port Redundant Serial Device Server

Why Korenix

- **Flexibility** - 7 10/100-TX ports and 3 Gigabit RJ-45/SFP combo ports (10/100/1000 Base-TX, 100 Base-FX, 1000 Base-X)
- **Reliable** - Multi-Form Rapid Super Ring (recovery time <5ms), Dual Homing II, Multiple Ring, Any Ring and RSTP
- **Convenience** - JetPort 5604 series have four serial interfaces, and all of the interfaces can be configured with different serial interface types.





Mr. Stefan Życzkowski
Astor
Poland

Electric Power Distribution

Extraordinary Solution to the Power Distribution Stability



With the rapid growth of the Taiwanese economy, the electric power distribution is the essential issue towards the industrial advance and the high living standard of the household. Taiwanese power company (Taipower), the heart of electricity distribution in Taiwan, plays an important role of providing electricity to its citizens. Taipower is providing high quality electricity to people throughout the HSIANG CHENG ELECTRONIC feeders with Korenix reliable solutions - JetNet 4008f-s, JetCon 2301s. As the automation distribution downstream levels of electric power systems rise electric networking failure is unavoidable.

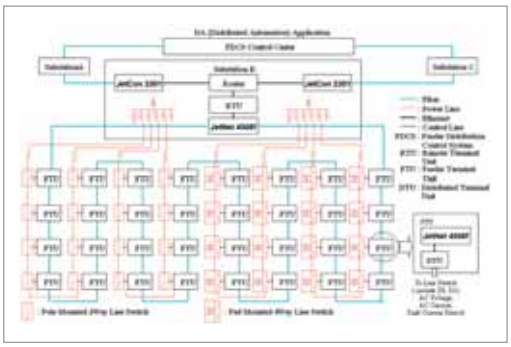
Taipower has adapted the Korenix JetNet4008f-s in its feeders to implement the Redundant Ethernet Super Ring, which transmits the signals of DIO& AC to a monitor control system that results in a restore time of less than 20ms. Therefore, as the fault occurs, the monitoring officer is well aware of the location and is capable of isolating the fault and shorten the damage control time with minimal loss time. From one station to another, HSIANG CHENG ELECTRONIC has complemented the distance limitation of Ethernet networking with the Korenix JetCon2301s. JetCon2301s is perfectly qualified while extending the transmission distance up to 30KM and also prevents connection failure by Link Loss Forwarding (LLF).

Main Products

- JetNet4008f-s Industrial 8-port Web-Managed Ethernet Switch
- JetCon2301-s Industrial Fast Ethernet to Fiber Media Converter

Why Korenix

- **Solid** - Rigid Aluminum Case Complies with IP31, -10~70°C operating temperature, Redundant power, DIN-Rail /Wall-Mounting /Desktop Installation
- **Supports VLAN/QoS/IGMP Snooping** - VLAN (Virtual LAN) provides many benefits when you plan your network for Industrial applications and IGMP Snooping- Deliver the right data to right place.
- **Link Loss Forwarding technology** - For the easy maintenance and time-saving, JetCon2301 features remote Link Loss Forwarding technology.





Mr. Ji-Ren Chu
HSIANG CHENG ELECTRONIC CROP.
Taiwan

Surface Ship Systems for Detection Underwater

Detected the Objects Immersed by Sonar Floats



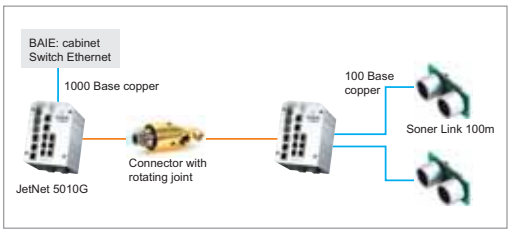
Floating Sonar detection systems are commonly used by the French Navy in order to detect immersed objects nearby. The detection systems are developed to cover a great deal of operational requirements and normally compact enough to be installed on different warships. To ensure the nonstop transmission of the essential data collected from the underwater sonar back to the control room in the cabin, it requires not only high-speed gigabit Ethernet and fiber connection, but also the rapid ring recovery in case any link failure occurred. In addition, water-proof and corrosive-resistant network equipments are indispensable for the severe maritime environment. Therefore, JetNet5010G, the industrial 10-port managed switch was chosen in this project due to its flexibility of using fast gigabit and SFP combo ports, with its rapid ring recovery time as low as 5ms. Korenix enhanced protection of conformal coating on the switch board against corrosive an maritime atmosphere, and the immediate technical support from Korenix team.

Main Products

- JetNet 5010G Industrial 7+3G Gigabit Managed Ethernet Switch
- Transceiver SFP1000SX

Why Korenix

- **Flexibility** - Adaptation of the firmware of the switch to the constraints of the application.
- **Solid** - Rigid Aluminum Case Complies with IP31, Curvilinear heat dispersing, Redundant power, DIN-Rail /Wall-Mounting /Desktop Installation.
- **Customization** - Service of adding conformal coating on switch board under reasonable budget with a guarantee of 5 years.





Mr. LEHMANN Philippe
APLUS-SA
France

Naval Sector

Sailing up the Network on Board



Integrated control technologies are becoming a new trend in naval sector gradually where not only the integrated network interface is often considered, but also the rugged, anti-erosion and water proof networked devices are indispensably required.

For example, many shipyards are beginning to discover the great potential and take the most use of the convenience and reliability of industrial Ethernet aiming to integrate various interfaces and functions, such as PLC systems related to navigation, automation and control of the vessel and guarantee a good standard of comfort on board with Safety and Reliability.

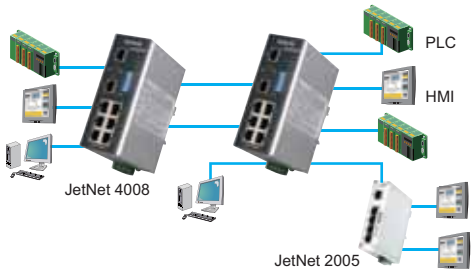
The industrial Ethernet switch JetNet 4008 is chosen and deployed in this harsh environment firstly for its Ring redundancy as the non-stop data transmission the IP 31 protection. Furthermore, JetNet 4008 also supports VLAN/QoS/IGMP Snooping etc, featuring the multiple management functions under the efficient and effective administration by the maintenance crew of navy sector.

Main Products

- JetNet 4008 Industrial 8-Port Web-Managed Ethernet Switch

Why Korenix

- **Solid** - Rigid Aluminum Case Complies with IP31, -20~70°C operating temperature, DIN-Rail /Wall-Mounting /Desktop Installation
- **Redundant Power Inputs** - Dual power inputs and built-in reverse power polarity protection are designed as the redundant power system to ensure your power
- **Alarm Relay Output** - One relay output is an important feature to let you know when there is any event of port link down. Just move up the DIP switch, the fault relay alarm will be functioning!





Mr. Enrico Cappochi
Technoteam
Italy

GAS Distribution Station

Make the Delivery Controlled and Reliable



Natural Gas is a new trend of clean energy, and it has become the mainstream power source for public transportation, household uses…etc in major metropolitans throughout the world. Reasons for adapting to Natural Gas from traditional sources of power such as Nuclear Power or Coal Power are for improving the polluted environments caused by or as a result of global warming, air pollution, chemical pollution, safety issues…etc. One of the most common and effective methods of transporting the Natural Gas is going through the underground pipelines because Natural Gas are flammable, explosive and destructive.

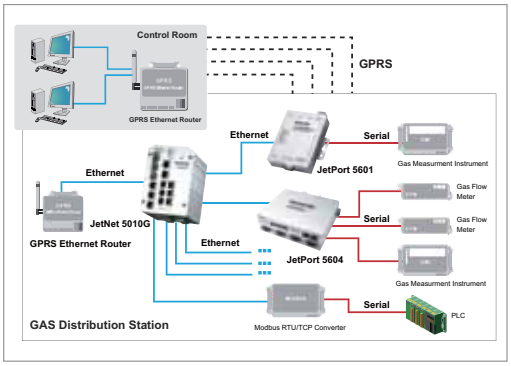
So, the way to ensure the reliability and safety passage of pipeline absolutely is to build a control system which is capable to monitor the conditions of distributive supporting equipments and gas pipeline systems. A gas distribution company which secures the transmission of natural gas across Czech Republic and delivers it to regional gas distribution companies, used JetNet 5010G in controlled gas delivery and regulation stations. Each station works automatically and it is on-line monitored from the central control room while several measured dates are stored in status server. The measurement units communicate via RS232 or RS422, where the JetPort 5601 or JetPort 5604 is used.

Main Products

- JetNet 5010G Industrial 7+3G-port Gigabit Managed Ethernet Switch
- JetPort 5601 Industrial 1-port RS-232/422/485 Redundant Serial Device Server
- JetPort 5604 Industrial 4-port Redundant Serial Device Server

Why Korenix

- Flexibility - 7 10/100-TX ports and 3 Gigabit RJ-45/SFP combo ports (10/100/1000 Base-TX, 100 Base-FX, 1000 Base-X)
- Rugged - Rigid Aluminum Case Complies with IP31, Curvilinear heat dispersing, Redundant power, DIN-Rail /Wall-Mounting /Desktop Installation, Wide temperature -20~70°C
- Reliable - Multi-Form Rapid Super Ring (recovery time <5ms), Dual Homing II, Multiple Ring, Any Ring and RSTP





Mr. Jaroslav Dedek (Left)
Mr. Jaroslav Prokes (Right)
TECON
Czech

Water Treatment System

Gigabit Networking & Surveillance System



Water Treatment describes the processes used to make water more acceptable for a desired end-use. These can include use as drinking water, for use in industrial processes or to allow discharge into the environment without ecological impact.

In China, the system integrator built up the water treatment system by installing the Korenix Ethernet switch connected with the PLC controlled the pump status and formed a ring network to eliminate network downtime, keeping information flowing at all times for sending back to the control center.

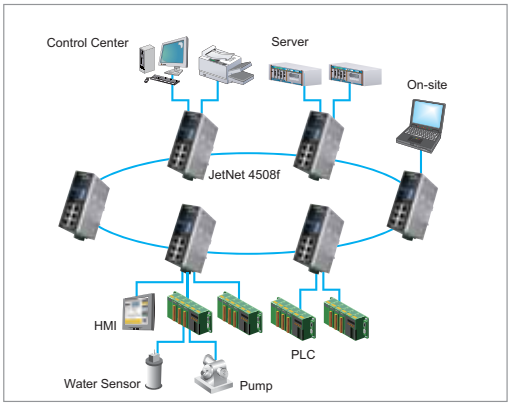
With the JetNet 4508f can configure Enhanced Super Ring which is most stable topology of a system, the recover time of Network is <20ms, and can build system redundancy for each station. Also it can be configure to use with PLC and various kind of control unit. The JetNet 4508 Series designed under the consideration of abnormal climate, so the operation temperature is –20 to 70°C degree , therefore it can be best solution for industrial field.

Main Products

- JetNet 4508f Industrial 8-port Managed Ethernet Rail Switch

Why Korenix

- **Redundant** - Best with two DC24V input, and also compatible with range from 12V~48V.
- **Reliable** - Recovery time<20 ms gives you fault-tolerant connection. JetNet 4508 series also support Dual Homing and Ring Coupling.
- **Full Management** - Versatile and User-friendly configuration interface, including SNMP, VLAN, QoS, IGMP, event warning, etc.





Miss Nona Zhang
Acitetch
China

Korenix Industrial Product Selection Guide - Rackmount Managed Switch





	JetNet 5628G (Preliminary)	JetNet 5228G
	Modular Managed Switch	Rockmount Managed Switch
Interface		
Number of Ports:10/100TX	Max. 24	24
Number of Ports: 10/100/1000TX	4	4
Number of Ports: Fiber	Max. 22 (18+4G)	4 (Gigabit)
(Multi Mode Fiber)	100-FX/SC or SFP	SFP
(Single Mode Fiber)	10-120KM	10-120KM
Console	●	●
Ac Power Input	100-240VAC	100-240VAC
DC Power Input	18-48VDC *2	
Power Consumption	Max. 35 Watts	Max. 20 Watts
Fault Relay Output	2 DI + 2 DO	
Fan	Intelligent Fan Control	Fanless
Mechanical		
1U Rack Mount	●	●
F.E. Module	●	●
Dimensions (unit=mm)	44mm(H) x 431mm (W) x 340mm (D)	44mm(H) x 438mm (W) x 170mm (D)
Operating Temperature	-25~70°C	-10~50°C
Rack-Mount Kit	●	●
Protocols		
CLI/Web Configuration	●	●
JetView	●	
Port Trunking	●	●
Network Redundancy	Multiple Super Ring	Multiple Spanning Tree Protocol
IGMP Snooping & IGMP Query	●	●
Tag-VLAN	●	●
Quality of Service	●	●
SNMP V1/V2C/V3	●	●
LLDP	●	●
Layer2+ ACL	●	●
HTTPS,SSH,Port/IP Security, 802.1x	●	●
Certifications		
Regulatory Approvals:CE / FCC	●	●
RoHS / WEEE	●	●

JETNET

Korenix Industrial Product Selection Guide - Managed Switch


JetNet 5010G


JetNet 5008G-P


JetNet 4510


JetNet 4010


JetNet 4508 / 4508f


JetNet 4008 / 4008f


JetNet 4005

	Gigabit Managed Ethernet Switch / board		Managed Ethernet Switch		Web-managed Ethernet Switch		
Interface							
Number of Ports:10/100TX	7	6	7	7	8 (JetNet 4508) 6 (JetNet 4508f)	8 (JetNet 4008) 6 (JetNet 4008f)	5
Number of Ports: 10/100/1000TX	3 (Combo)	2 (Combo) 1(10/100/1000 RJ)	3 (10/100TX Combo)				
Number of Ports: Fiber	3 (Gigabit & 100FX)	2 (Gigabit & 100FX)	3 SFP	3 SFP	2 (100FX)	2 (100FX)	
(Multi Mode Fiber)	Multi-mode SFP	Multi-mode SFP	Multi-mode SFP	Multi-mode SFP	JetNet 4508f-m	JetNet 4008f-m	
(Single Mode Fiber)	Single-mode SFP	Single-mode SFP	Single-mode SFP	Single-mode SFP	JetNet 4508f-s	JetNet 4008f-s	
Number of RS232 Console Port	1		1	1			
Power Terminal	DC24V*2 (12~48) -48(Option)	DC24V*2 (12~48) -48(Option)	DC24V*2 (12~48) -48(Option)	DC24V*2 (12~48) -48(Option)	DC24V*2 (12~48) -48(Option)	DC24V*2 (12~48) -48(Option)	
Power Jack					DC24V(12~48)	DC24V(12~48)	
Power Consumption	Max. 11.5 Watts	Max. 10 Watts	Max. 11.5 Watts		Max. 5.04 Watts (JetNet 4508) Max. 7.68 Watts (JetNet 4508f)	Max. 5.04 Watts (JetNet 4008) Max. 7.68 Watts (JetNet 4008f)	3.1 Watts
Fault Relay Output	●	●	●	●	●	●	●
1200VAC HIPOT	●	●	●	●	●	●	●
Mechanical							
Rigid Aluminum Case	●		●	●	●	●	●
Case Protection	IP 31		IP 31	IP 31	IP 31	IP 31	IP 31
Dimensions (unit=mm)	137(H) x 96(W) x 119(D)	30(W) x 20(H) x 40(D)	137(H) x 96(W) x 119(D)		53(W) x 135(H) x 105(D)	53(W) x 135(H) x 105(D)	
Operating Temperature	-20~70°C	-25~70°C	-20~70°C	-20~70°C	-20~70°C (JetNet 4508) -10~70°C (JetNet 4508f)	-20~70°C (JetNet 4008) -10~70°C (JetNet 4008f)	-20~70°C
DIN-Rail Kit	●		●	●	●	●	●
Protocols							
Web-based Configuration	●	●	●	●	●	●	●
JetView	●	●	●	●	●	●	●
HTTPS,SSH,Port/IP Security,802.1x	●	●	●	●	(IP Security)	(IP Security)	
Super Ring, Couple Ring, Dual Homing		Rapid Super Ring (5ms) / Muliple Super Ring (5ms)			Super Ring (20ms)	Super Ring (20ms)	
IGMP Snooping & IGMP Query	●	●	●	●	●	●	●
Tag & Port - Based VLAN	Tag VLAN	Tag VLAN	Tag VLAN	Tag VLAN	●	●	●
Quality of Service	●	●	●	●	●	●	●
SNMP V1/V2C	V1/V2C/V3	V1/V2C/V3	V1/V2C/V3		●		
RMON1	●	●	●		●		
SMTP(e-mail warning)	●	●	●	●	●		
Syslog	●	●	●	●	●		
Certifications							
Regulatory Approvals:CE / FCC / UL	●		●	●	●	●	●
RoHS / WEEE	●	●	●	●	●	●	●

Korenix Industrial Product Selection Guide - Unmanaged Switch

	 JetNet 3018G (Preliminary)	 JetNet 3010G	 JetNet 3008	 JetNet 3008f	 JetNet 3005 / 3005f	 JetNet 2005 / 2005f
	Value Add Ethernet Switch	Value Add Ethernet Switch	Entry-Level Ethernet Switch			Compact Ethernet Switch
Interface						
Number of Ports:10/100Base-TX	16	7	8	6	5 (JetNet 3005) 4 (JetNet 3005f)	5 (JetNet 2005) 4 (JetNet 2005f)
Number of Ports: 10/100/1000TX	2 (Combo)	Port # 8.9 10/100/1000 Port # 10 1000				
Number of Ports: Fiber	2 (SFP)	3 (Gigabit SFP)		2 (100FX)	1 (100FX) (JetNet 3005f)	1 (100FX) (JetNet 2005f)
(Multi Mode Fiber)	Multi-mode SFP	Multi-mode SFP		JetNet 3008f-m	JetNet 3005f-m	JetNet 2005f-m
(Single Mode Fiber)	Single-mode SFP	Single-mode SFP		JetNet 3008f-s	JetNet 3005f-s	JetNet 2005f-s
Number of RS232 Console Port						
Power Terminal	DC24V*2 (12~48) -48(Option)	DC24V*2 (12~48) -48(Option)	DC24V*2 (12~48) -48(Option)		DC24V*2 (12~48) -48(Option)	DC18~32V AC18~27V
Power Jack					DC24V(12~48)	
Power Consumption	Max. 10 Watts	Max. 11.5 Watts	Max. 8Watts	Max. 12Watts	Max. 2.5 Watts (JetNet 3005) Max. 3.7 Watts (JetNet 3005f)	Max. 3 Watts (JetNet 2005) Max. 4 Watts (JetNet 2005f)
Fault Relay Output	●		●	●		●
1200VAC HIPOT	●	●	1500VAC HIPOT		●	1500VAC HIPOT
Mechanical						
Rigid Aluminum Case	●	●	●	●	●	●
Case Protection	IP 31	IP 31	IP 31	IP 31	IP 31	IP 31
Dimensions (unit=mm)	96(W) x 145(H) x 139(D)	96(W) x 145(H) x 139(D)	55(W) x 120(H) x 108(D)		53(W) x 135(H) x 105(D)	30(W) x 111.8(H) x 98.2(D)
Operating Temperature	-20~70°C	-20~70°C	-25~70°C	-10~70°C	-20~70°C (JetNet 3005) -10~70°C (JetNet 3005f)	-20~70°C (JetNet 2005) -10~70°C (JetNet 2005f)
DIN-Rail Kit	●	●	●	●	●	●
Protocols						
Web-based Configuration						
JetView						
Secured HTTPS,SSH						
Super Ring, Couple Ring, Dual Homing						
IGMP Snooping						
Port VLAN						
Quality of Service	●	●	●	●		
SNMP V1/V2C						
RMON1						
SMTP(e-mail warning)						
Syslog						
Certifications						
Regulatory Approvals:CE / FCC / UL	CE / FCC	●	CE / FCC	CE / FCC	●	CE / FCC
RoHS / WEEE	●	●	●	●	●	●

JetNet 5628G (Preliminary)

Industrial Modular Managed Ethernet Switch



- 3 modular slots design enable you to add up to 24 10/100-TX or 18 100Base-FX
- 4 On-Board Gigabit RJ-45/SFP combo ports support 10/100/1000 Base-TX, 1000 Base-X SFP
- 12.8G Non-Blocking Switching Performance and up to 16K MAC Address table
- IEC61850-3, IEEE1613 Power Substation Standard Compatibility
- Supports Jumbo Frame up to 9,216 bytes
- Korenix Multiple Super Ring (Rapid Dual Homing, MultiRing™, TrunkRing™, RSR, SR) and RSTP
- Link Layer Discovery Protocol (LLDP), SNMPv3 and JetView Discovering and Management
- Advanced Security by 802.1x and Access Control List
- Dual 100-240VAC and Dual 12-48VDC power input
- Intelligent Temperature Monitoring and FAN Control

Overview

The JetNet 5628G is an Industrial Modular Managed Ethernet Switch, equipped with 3 sockets for maximum 24 10/100 Base-TX Ports or 18 100Base-FX Fiber interfaces ports plus 4 Gigabit RJ45 / MINI GBIC combo ports.

The JetNet 5628G, a special design for substation automation and industrial control room, meets the IEC61850-3, IEEE1613 high level environment certifications(pending). Dual high power, 100-240V AC module and 18-48VDC power input are flexible for field power constructions.

The advantage of choosing the JetNet 5628G is that the switch supports 4 gigabit ports which allow users to trunk up to 8G uplink bandwidth or to form 2 independent Gigabit rings. The switch also supports Jumbo Frame forwarding up to 9.2Kbytes. The large files transmitting in industrial environments becomes more efficient and solid.

To fulfill the advanced management, control and security in power substations and control rooms, the JetNet 5628G supports various software features. The VLAN, QoS, IGMP, layer 2/4 Access Control List, 802.1x, SNMP V3, LLDP, etc. complete the demand and greatly satisfy technicians' requests.

IEC61850-3 / IEEE1633 Compatibility

In the substation environment, there are many EMI & Environment Phenomena, such as the electric, magnetic, high energy power surge, uncontrolled temperature & humidity...etc. When it comes to the Ethernet for substation automation, the utility companies generally advise you comfort to the IEC61850 standard and IEC1613 standard. IEC 61850 is standardized for the design of substation automation.

It defines the standard for the "Communication Networks and Systems in Substations". The IEC61850-3 defines the "General Requirements" for the relevant equipments. The IEC1613 defines the "Standard Environmental and Testing Requirements for Communications Networking Devices in Electric Power Substations".

Flexible Module Design

The JetNet 5628G provides several types of Fast Ethernet modules. There are 8 10/100Base-TX ports, 4 100Base-FX/SC ports plus 2 100Base-FX SFP and 4 10/100Base-TX plus 4 100Base-FX modules. Turn off the power at the front on the switch and you are able to insert the modules or exchange the module types. The modular design is more flexible for purchasing, less storage of stock and field installations. Once the distance is over 100 meters, users can exchange modules without replacing device. As purchasing the JetNet 5628G, please confirm the media type and the port volume.

Naming Rule: JNM5-ABBCC/ABBCC

JNM5	**A: Port Volume**	**BB: RJ-45/Fiber**	**CC: Type of Fiber Connector**
5: JetNet 5xxx Series Module	2: 2 Ports 4: 4 Ports 8: 8 Ports	TX: RJ45 M: Multi mode S: Single Mode	SC: SC Connector ST: ST Connector SFP: SFP socket

JetNet 5628G Modules:



JNM5-8TX:
8 ports 10/100Base-TX module



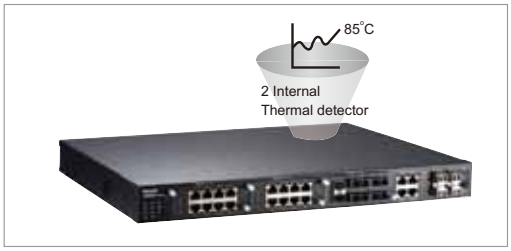
JNM5–2SFP/4MSC:
2 ports 100Base-FX SFP + 4 ports 100Base-FX/SC Multi-mode
JNM5–2SFP/4SSC:
2 ports 100Base-FX SFP + 4 ports 100Base-FX/SC Single-mode



JNM5-4TX/4SFP: 4 ports 10/100Base-TX + 4 100FX-SFP

Intelligent Temperature & Fan Control

The JetNet 5628G is designed with rack-mount mechanical case. 5628G equips with 2 AC power module and 2 DC inputs. The AC and DC power module can backup with each. It also equips 2 thermo meter inside the box, it monitors the temperature inside the box and allows you to check the temperature inside. When the environment becomes very heat and critical, the FAN can be automatically or manually activated. In most environment, the rack is located in indoor rack, the temperature inside the rack is controlled and cool. Such environment is not such critical so that the embedded FAN does not work. The lifetime



of the FAN becomes longer than continuously run. Should the environment becomes hot and the measured temperature inside is more than 85 0C. The FAN will be automatically activated or manually configure to cooler the temperature.

High Bandwidth and Performance

The JetNet 5628G supports 4 gigabit combo ports and up to 9,216 bytes jumbo frame.

Why 4 gigabit combo ports?

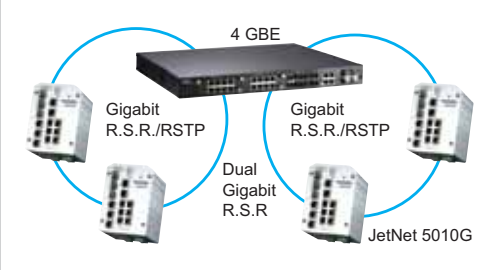
- Port Trunking with up to 8G bandwidth in full duplex mode.
- To form 2 independent Rapid Super Rings directly. Or to form one ring and trunk with another 5628G.
- Using 2 Gigabit ports for forming rings, the other 2 for connecting to public servers.
- The Combo Ports Design saves stock of storing different kinds of transceivers.
- With dual gigabit rings, the JetNet 5628G can perform as the access-level switch.

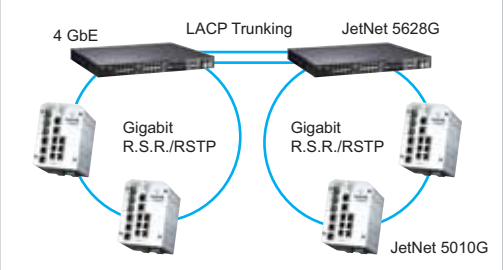
What is Jumbo Frame?

The typical Ethernet frame range is from 64 to 1518 bytes. This is abundant for general usages. However, when users want to transmit large files, the files may be divided into many small size packets. While the transmitting speed becomes slow, 9KBytes Jumbo frame can solve the issue.

Jumbo Frame examples:

- Transmitting large files, like the size of the LCD's bitmap type circuit may be up to 800MB.
- Network servers usually progress backups for large of files.





Multiple Super Ring Technology

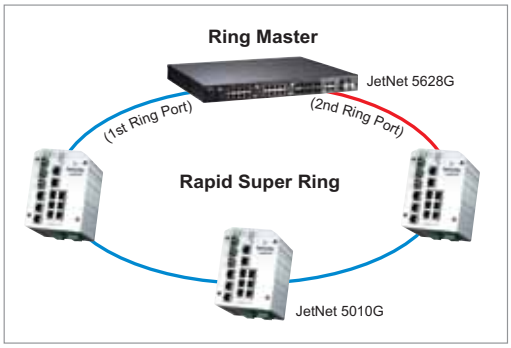
The JetNet 5628G supports new generation ring technology – MSR™ which includes various new technologies for redundancy applications and structures of different networks.

Multiple Super Ring

Rapid Super Ring	Rapid Dual Homing	MultiRing	TrunkRing
■ Ring Master auto-select ■ Seamless restoration ■ Ring Failure alarms/LED ■ Failed ring port together with Ring Master ■ Up to 5ms Recovery Time ■ Backward compatible with legacy Super Ring	■ Multiple Uplink Paths ■ One to One upper, Many to One upper, one to many upper and many to many upper switches ■ Seamless restoration ■ Korenix Patent protected	■ Couple 2 rings with shared unit ■ Multiple up to 16 rings ■ Tangent Ring Tech., 4G for couple 2 Gigabit rings ■ Korenix Patent protected	■ Integrate Port Trunk/ LACP with MSR™, RSR ■ Load balancing of ring Ports ■ Path Backup ■ Korenix Patent protected

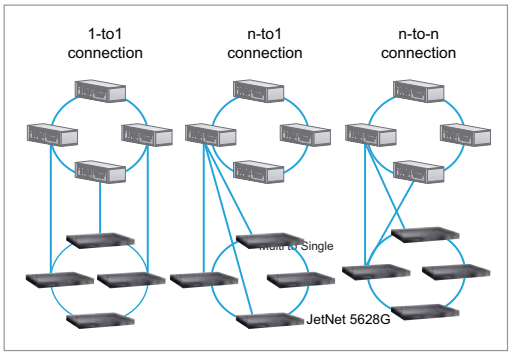
Rapid Super Ring (RSR) Technology

Rapid Super Ring is the 2nd generation of Korenix Ring Redundancy technology. The recovery time is greatly improved from 300ms to few ms for both copper and fiber ring. The Ring Master can be auto-selected by the RSR engine. The 1st Ring Port of the R.M. is the primary path while the 2nd Ring Port of the R.M. is the block path. Once the primary path fails, the 2nd path will be recovered within few ms. Besides, the restore time is also shortened to zero in the R.M. auto-selection mode.



Rapid Dual Homing (RDH™) Technology

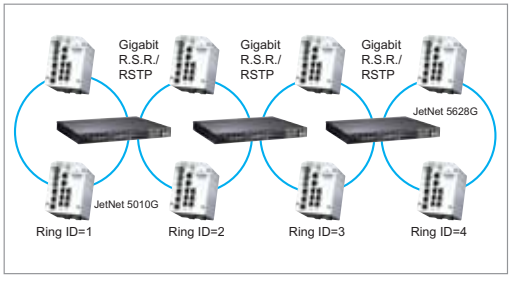
Rapid Dual Homing (RDH™) replaces DualHoming II and can be used for ring coupling. While keeping easy configuration and multiple redundancies, the failover time is much faster (less than 50 ms) and the restore time is ZERO (seamless restoration). Uplinks can be auto detected and gathered into groups. In each group, uplinks are sorted into Primary, Secondary, and Standbys by their link speed. The uplink with the highest speed is more likely to be the active path for data transmission. Link aggregation is also integrated into RDH™. An uplink can be a link or several links aggregated as a trunk, which provides better redundancy and link capacity.



MultiRing™ Technology

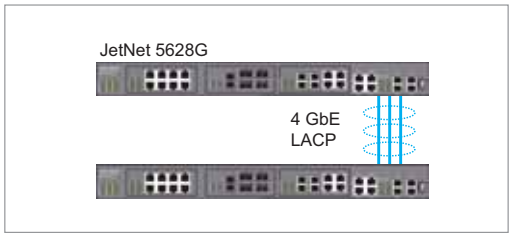
The MultiRing™ is a new technology that constructs coupling rings without controlling ports and achieves different coupling structures by TangentRing™ technology which provides nod or path backup abilities.

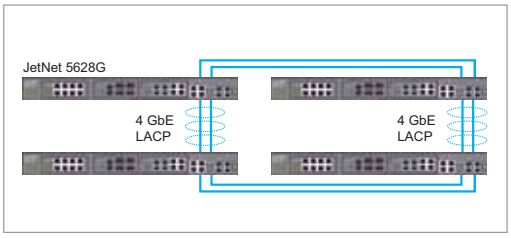
With the MultiRing™ Technology, users can enlarge the network campus by applying different Ring IDs, different from one to another, in order to get the unlimited Ring Coupling ability.



Link Aggregation Control Protocol, TrunkRing™ Technology

Link Aggregation Control Protocol allows you to group multiple Ethernet ports in parallel to increase the link bandwidth. The aggregated ports can be considered as one physical port, so that the bandwidth is higher than just one single Ethernet port. The member ports of the same trunk group can balance the loading and backup with each other. The LACP feature is usually used when you need higher bandwidth for the backbone network. This is an inexpensive way for users to transfer much more data. If the trunk port is also assigned as a ring port, it will become as a TrunkRing™ – which means that the bandwidth of ring path has increased with port trunk technology, and there is no recovery time when failures occur. The JetNet 5628 provides a simple and easy way to aggregate port bandwidth into Rapid Super Ring.





Link Layer Discover Protocol

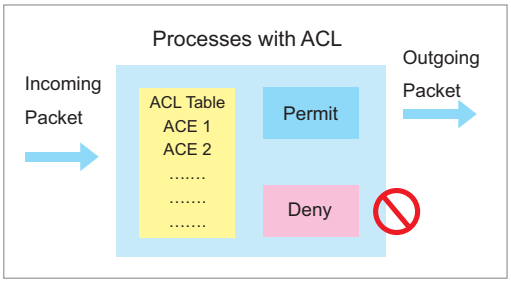
The Link Layer Discover Protocol (LLDP) was formally ratified as IEEE 802.1AB-2005. LLDP is the Layer 2 protocol that allows the network device/ station to advertise the connectivity & management information, the identity & major capabilities, receives and establishes the network management information on the same local network.

In industrial environments, most vendors provide their own discovering protocol, window utilities or other tools to manage their switches. The LLDP protocol fixes the interoperability among them. With LLDP supported, users can easily browse the network devices, establish the network management information schema of the stations.

Advanced Security by Layer 2/4 Access Control List

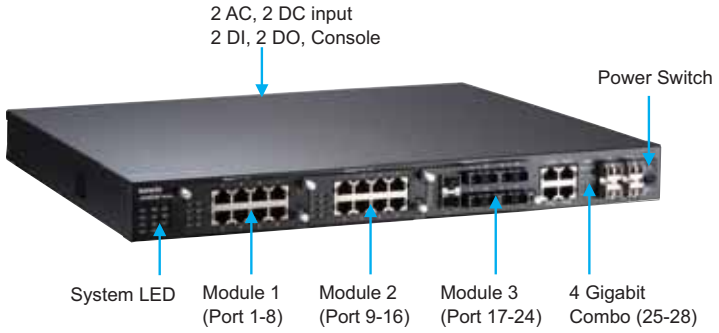
In substation automation or industrial control room installation, the multi types of advanced security features are required and must be implemented. The secured Access Control List (ACL) makes it easy to limit certain devices communicating with the other addressed devices and by the specific protocol. Example rules include (1) the administrator to multiple stations, (2) stations to stations and (3) stations to public servers…etc.

The ACLs provide “Permit” and “Deny” rules for any or the specific host. The IP address, MAC address and port ID are the destinations allowed to be applied the rules. The protocol ID, QoS tag, TCP flag…

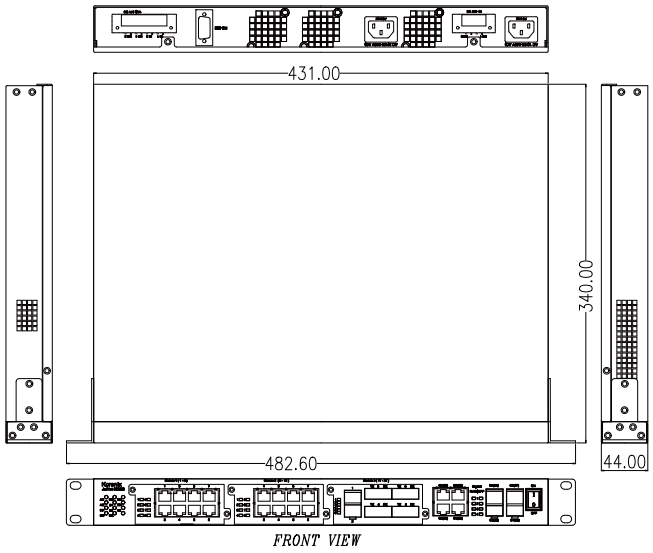


are the operations which users prefer to control. The JetNet 5628G is equipped with one layer 2+ switch fabric which provides flexible ACLs for the specified subjects and operations within the same LAN.

JetNet 5628G Appearance



Dimensions (Unit –mm)



Specification

Technology

Standard:
IEEE 802.3 10Base-T Ethernet
IEEE 802.3u 100Base-TX Fast Ethernet
IEEE 802.3ab 1000Base-TX
IEEE 802.3z Gigabit Ethernet Fiber
IEEE 802.3x Flow Control and Back-pressure
IEEE 802.1p class of service
IEEE 802.1Q VLAN and GVRP
IEEE 802.1D-2004 Rapid Spanning Tree Protocol (RSTP)
IEEE802.3ad LACP
IEEE802.1X Port based Network Access Control
IEEE802.1AB Link Layer Discovery Protocol

Performance

Switch Technology:
Store and Forward Technology, 12.8Gbps Wire-speed Switching
System Throughput: 14,880pps for 10M Ethernet, 148,800pps for 100M Fast Ethernet, 1,488,100 for Gigabit Ethernet
Transfer packet size: Typical: 64 bytes to 1536 bytes,
Jumbo Frame Enabled: Up to 9,216bytes
MAC Address: 16K MAC
Packet Buffer: 32Mbits
Relay Alarm: Dry Relay output with 1A@24V ability

Management

Configuration: Cisco-Like CLI, JetView, Web, HTTPS, backup/restore, DHCP Client, Warm reboot, Reset to default, Admin password, Port Speed/Duplex control, status, statistic, MAC address table display, Static MAC, Aging time, **Jumbo Frame Enable/Disable**
LLDP: Link Layer Discovery Protocol to advertise system/ port identity and capability on the local network
SNMP: SNMP v1, v2c, v3 and Traps.
SNMP MIB: MIB-II, Bridge MIB, VLAN MIB, SNMP MIB, RMON and Private MIB
Port Trunk: Static Trunk and 802.3ad LACP , Up to 6 Trunk Group, 8 ports per trunk
VLAN: IEEE802.1Q VLAN, GVRP. Up to 255 VLAN groups
Quality of Service: Four priority queues per port, IEEE802.1p COS and Layer 3 TOS/DiffServ
IGMP Snooping: IGMP Snooping V1/V2/V3 for multicast filtering and IGMP Query V1/V2
Rate Control: Ingress filtering for Broadcast, Multicast, Unknown DA or All packets, step by 64kbps
NTP: Network Time Protocol to synchronize time from Internet
IEEE1588 Precision Time Protocol (PTP): Average convergence time is up to 100uS (micro-second)
Embedded Watchdog: Embedded hardware watchdog timer to auto reset system when switch system failure
Port Mirroring: Online traffic monitoring on multiple selected ports
Port Security: Assign authorized MAC to specific port
IP Security: IP security to prevent unauthorized access
802.1x: Port_based Network Access Control
Access Control List (ACL): Layer 2+ ACL Security
DHCP Option 82
DHCP Server: Can assign 255 IP address, support IP and MAC binding
E-mail Warning: Automatic warning by pre-defined events
System Log: Supports both Local mode and Server mode

Network Redundancy

Rapid Spanning Tree Protocol: IEEE802.1D-2004 Rapid Spanning Tree Protocol. Compatible with Legacy STP and IEEE802.1w
Multiple Super Ring (MSR)™ : New generation Korenix Ring Redundancy Technology, Includes Rapid Super Ring, Rapid Dual Homing, TrunkRing™, MultiRing™ and backward compatible with legacy Super Ring
Rapid Dual Homing (RDH)™: Multiple uplink paths to one upper switch or multiple upper switch
TrunkRing™: Integrate port aggregate function in ring path to get higher throughput ring architecture
MultiRing™: Couple or multiple up to 16 Rapid Super Rings
Legacy Super Ring: Backward compatible in client mode
RTTD: Redundant to the Device, binding 2 ports together, only one of the ports works, the other is backup port

Interface

Number of Fixed Gigabit Ports:
10/100/1000Base-TX: 4 x RJ-45, combo with SFP 1000Base-X: 4 x SFP with Hot Swappable
Number of Ports in Modules:
JNM5-8TX: 8 x 10/100Base-TX, Auto MDI/MDI-X, Auto Negotiation
JNM5-2SFP/4MSC: 2 x 100Base-FX SFP plus 4 x 100Base-FX Multi mode
JNM5-2SFP/4SSC: 2 x 100Base-FX SFP plus 4 x 100Base-FX Single mode
JNM5-4TX/4SFP: 4 x 10/100Base-TX plus 4 100Base-FX SFP
Cables:
10Base-T: 2-pair UTP/STP Cat. 3, 4, 5 cable (100m)
100 Base-TX: 2/4-pair UTP/STP Cat. 5 cable (100m)
1000 Base-T: 4-pair UTP/STP Cat. 5 cable (100m)
Diagnostic LED:
System: AC Power 1/2(Green), DC Power 1/2 (Green), RDY(Ready) (Green), Digital Input 1/2(Green), Ring Master (Green), Digital Output 1/2(Red), Ring Fail (Red)
10/100 RJ-45: Link/Activity (Green/Green Blinking)
Gigabit Copper/SFP: Link/Activity (Green/Green Blinking)
RS232 Console: DB9 Connector, Pin3: TxD, Pin2: RxD, Pin5:GND
Power: 2 sets of AC inputs, 2 sets of DC inputs
Digital Input: 2 sets of Digital Input
logic low (0): 0-10VDC/Logic High(1): 11-30VDC
Alarm: 2 sets of Relay outputs for configurable events

Alarm Events: Power and Ports Failure, DI state, DO state, Ping Failure, Super Ring Topology Change
Intelligent Temperature Monitoring: Automatically monitoring the cabinet operating temperature
Intelligent FAN: Automatically activate when cabinet operating temperature over 85°C or Manually control

Power Requirements

Power: 2 sets of 100-240VAC power module, 2 sets of 18-48V DC power Inputs
Power Consumption: Maximum 35 Watts

Mechanical

Installation: 19-inch, 1U Rack Mount
Case: Aluminum metal case
Dimension: 44mm(H) x 431mm (W) x 340mm (D)
Weight: 3.5 kg with package

Environmental

Operating Temperature: -25 ~70°C
Operating Humidity: 5% ~ 95% (non-condensing)
Storage Temperature: -40 ~ 85°C
Hi-Pot: 1.5KV for ports and power

Regulatory Approvals

Power Automation: IEC 61850-3, IEEE 1613 (Pending)
EMI: FCC Class A, CE/EN55022. Class A
EMS: EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11
Safety: UL, cUL, EN60950 (Pending)
Shock: IEC60068-2-27
Vibration: IEC60068-2-6
Free Fall: IEC60068-2-32
MTBF: Above 200,000 Hours, MIL-HDBK-217F GB standard
Warranty: 5 years

Ordering Information

JetNet 5628G Industrial Modular Managed Ethernet Switch

Includes:

- JetNet 5628G (Basic 4 Gigabit Combo Ports)
- Rack Mount Kit
- Console Cable
- Power Cord
- Quick Installation Guide
- Document CD

Additional Modules:

JNM5-8TX: 8 ports 10/100Base-TX module
JNM5–2SFP/4MSC: 2 ports 100Base-FX + 4 ports 100Base-FX/SC Multi-mode
JNM5–2SFP/4SSC: 2 ports 100Base-FX + 4 ports 100Base-FX/SC Single-mode
JNM5-4TX/4SFP: 4 ports 10/100TX + 4 100FX-SFP Socket

Optional Accessories

100Base-FX Multi-Mode SFP Transceiver
100Base-FX Single-Mode SFP Transceiver
100Base-FX BIDI/WDM Single-Mode SFP Transceiver
Gigabit Multi-Mode SFP Transceiver
Gigabit Single-Mode SFP Transceiver
Gigabit BIDI/WDM Single-Mode SFP Transceiver

JetNet 5228G

24+4G Standalone Managed Ethernet Switch



- 24 10/100-TX and 4 Gigabit RJ-45/SFP combo ports (10/100/1000 Base-TX, 1000 Base-X)
- Design for the Building, Control Room and Telecom applications
- 24+4G Non-Blocking Switching performance
- Supports Jumbo Frame up to 9,216 byte
- 802.1s Multiple Spanning Tree Protocol
- Link Layer Discovery Protocol (LLDP), SNMPv3, SSL, SSH management
- Advanced Security by 802.1x, Radius and Layer 2/4 Access Control List
- Advanced VLAN protocols, Protocol VLAN, Private VLAN and VLAN stacking (QinQ) for telecom service provider
- 100-240VAC power input and Fan-less Design

Overview

The JetNet 5228G, a 19-inch 24+4G standalone Managed Ethernet Switch, is equipped with 24 10/100 Base-TX ports plus 4 Gigabit RJ45 / MINI GBIC combo ports.

It is a special design for building, control room and telecom applications where request high-ports density and performance. The device is mounted within the 19 inch rack, along with other 19 inch public servers or other network devices. It also supports Jumbo Frame, forwarding up to 9.2Kbytes. Furthermore, the transmission of large files in industrial environments becomes more efficient and solid. The advantage of choosing the JetNet 5228G is that it supports 4 gigabit ports which allow users to trunk up to 8G uplink bandwidth, load balancing, path protection, to form network redundancy or apply MSTP to connect RSTP from different VLAN.

To fulfill the advanced management, control and security requests in industrial buildings and control rooms, the JetNet 5228G supports various advanced software features. The protocol VLAN, private VLAN, VLAN stacking, QoS, IGMP Snooping, layer 2/4 Access Control List, 802.1x, SNMP V3, LLDP, etc. complete the demand and greatly satisfy technicians' requests. Furthermore, the low power consumption and the fan-less design enhance the benefits on the industrial requests.

High Bandwidth and Performance

JetNet 5228G supports 4 gigabit combo ports and up to 9,216 bytes jumbo frame.

Why 4 gigabit combo ports?

- Act as the access switch, two gigabit ports for lower network, one or two for upper connection.
- The upper connection can be aggregated with up to 8G bandwidth in full duplex mode.
- 4 Combo Ports Design to save stock of storing different kinds of transceivers.
- 2 Gigabit ports for forming rings, the other 2 for connecting to public servers.

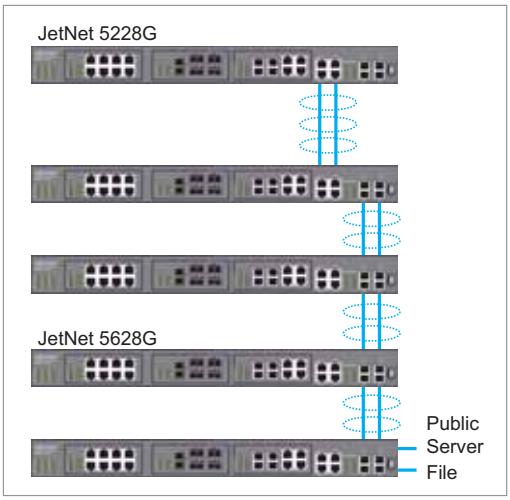
High Bandwidth and Performance

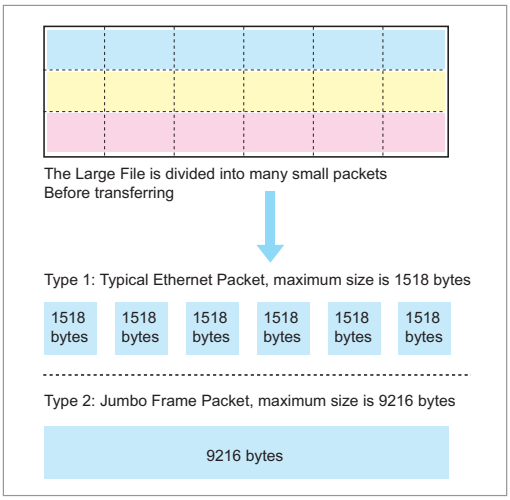
What is Jumbo Frame?

The typical Ethernet frame is range from 64 to 1518 bytes. This is sufficient for general usages. However, when users want to transmit large files, the files may be divided into many small size packets. While the transmitting speed becomes slow, 9.2KBytes Jumbo frame can solve the issue.

Jumbo Frame examples:

- Transmitting large files, like the size of the LCD's bitmap type circuit may up to 800MB.
- Network servers usually progress backups for large of files.




The Large File is divided into many small packets
Before transferring
Type 1: Typical Ethernet Packet, maximum size is 1518 bytes
1518 bytes
1518 bytes
1518 bytes
1518 bytes
1518 bytes
1518 bytes
Type 2: Jumbo Frame Packet, maximum size is 9216 bytes
9216 bytes

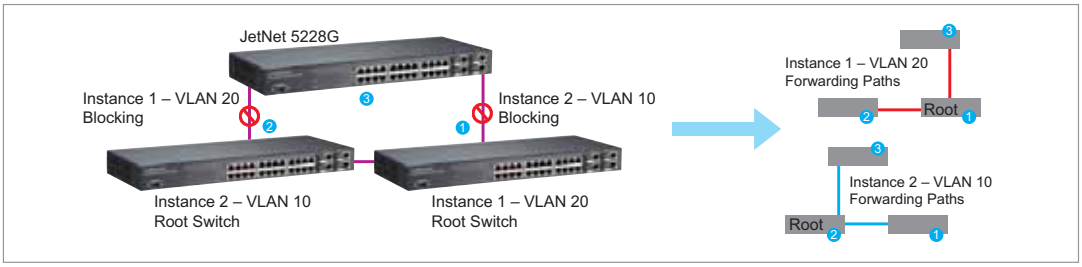
802.1s Multiple Spanning Tree Protocol

The JetNet 5228G supports 802.1s Multiple Spanning Tree Protocol (MSTP). The switch with MSTP enabled can select the root switch for each instance, block and form the forwarding path for each instance. Each instance represents for one VLAN. It is the limitation in STP/RSTP as the 2 traditional protocols only can block one path for all the existing VLANs in the same environment.

Example: Instance 1 represent for VLAN 20. Instance represent for VLAN 10.

In instance 1, there are one root and one blocking path. The VLAN 20 data can be transmitted from switch 3 to 1 to 2 or vise versa.

In instance 2, there are another root and another blocking path. The VLAN 10 data can be transmitted from switch 3 to 2 to 1 or vise versa.



Advanced VLAN Features

JetNet 5228G is specially designed to meet the Telecom/Internet service provider's requests. It provides many advanced VLAN protocols, Protocol VLAN, Private VLAN, VLAN stacking (QinQ) and Multicast VLAN Registration (MVR).

Protocol VLAN

Protocol VLAN allows you to create VLAN for the specific L3 protocols' packets, like the IP VLAN, IPX VLAN and AppleTalk VLAN. Different protocols' traffic is limited with the VLAN and can't be forwarded to the other VLANs.

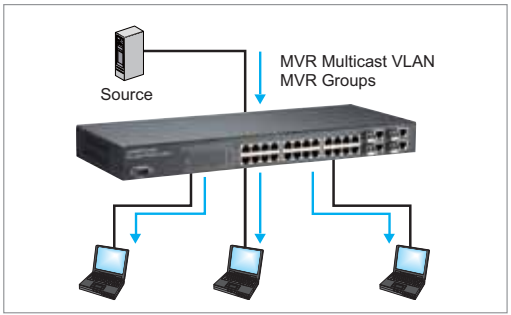
Private VLAN

The private VLAN allows ISP to direct client ports' traffic to uplink port only. The uplink port to upper switch/router acts as the Primary VLAN. The client VLANs act as secondary VLAN. There are 2 types of secondary VLAN, isolated or community. The isolated clients can only forwrd traffic to uplink port, they can't communicate with other secondary VLANs. The clients within the same community can forwrd traffic to uplink port and communicate with other members within the same community.

Multicast VLAN Registration (MVR)

Multicast VLAN Registration (MVR) is a useful application to lower the multicast stream loading of the source port. In traditional multicast program, when hosts that belong to different VLANs require the same multicast programs, the source station copy the multicast data and forward to each VLANs through the same router port. The result is waste of the network bandwidth.

To solve this problem, you can enable the MVR feature on 5228G. Assign the MVR multicast VLAN and available MVR multicast groups for the source station. Configure the MVR source or receiver for the

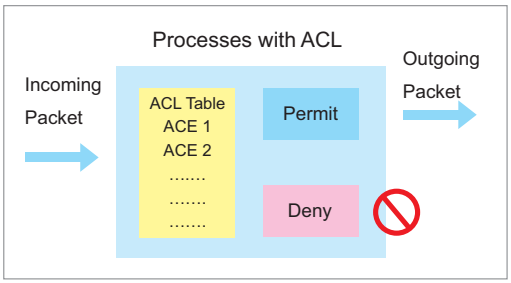


ports. So that the hosts belongs to different VLANs can receive the same multicast program but can't communicate with each other.

Advanced Security by Layer 2/4 Access Control List

In industrial building and control room installations, the multi types of advanced security features are required and must be implemented. The secured access control list (ACL) makes it easy to limit certain devices communicating with the other addressed devices and by the specific protocol. Example rules include (1) the administrator to multiple stations, (2) stations to stations and (3)stations to public servers… etc.

The ACLs provide "Permit" and "Deny" rules for any or specific host. The IP address, MAC address and port ID are the destinations allowed to be applied the rules. The protocol ID, QoS tag, TCP flag…



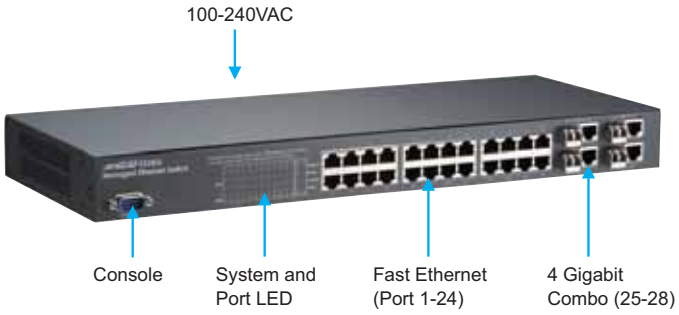
are the operations which users prefer to control. The JetNet 5228G equipped with one layer 2+ switch fabric which provides flexible ACLs for the specified subjects and operations within the same LAN.

Link Layer Discover Protocol

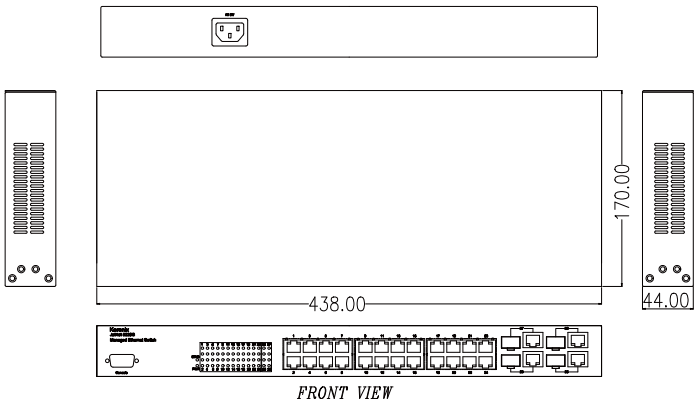
The Link Layer Discover Protocol (LLDP) was formally ratified as IEEE 802.1AB-2005. LLDP is the Layer 2 protocol that allows the network device/ station to advertise connectivity & management information, the identity & major capabilities, receives and establishes network management information on the local same network.

In industrial environments, most vendors provide their own discovering protocols, window utility or other tools to manage their switches. The LLDP protocol fixes the interoperability among them. With LLDP supported, users can easily browse the network devices and establish the network management information schema about the stations.

JetNet 5228G Appearance



Dimensions (Unit –mm)



Industrial PoE Switch
IP67/68 Ethernet Switch
Rackmount Managed Switch
Gigabit Switch
Redundant Switch
Entry-Level Switch
Networking Computer
Communication Computer
Ethernet I/O Server
Serial Device Server
Media Converter
Multiport Serial Card
SFP Module
Din Rail Power Supply

Specification

Technology

Standard:
IEEE 802.3 10Base-T Ethernet
IEEE 802.3u 100Base-TX Fast Ethernet
IEEE 802.3ab 1000Base-TX
IEEE 802.3z Gigabit Ethernet Fiber
IEEE 802.3x Flow Control and Back-pressure
IEEE 802.1p class of service
IEEE 802.1Q VLAN and GVRP
IEEE 802.1D-2004 Rapid Spanning Tree Protocol (RSTP)
IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)
IEEE802.3ad Link Aggregation Control Protocol (LACP)
IEEE802.1X Port based Network Access Control
IEEE802.1AB Link Layer Discovery Protocol
IEEE802.1v Protocol-based VLAN

Performance

Switch Technology:
Store and Forward Technology, 12.8Gbps Wire-Speed Switching
System Throughput: 14,880pps for 10M Ethernet, 148,800pps for 100M Fast Ethernet, 1,488,100 for Gigabit Ethernet
Transfer packet size: Typical: 64 bytes to 1536 bytes,
Jumbo Frame Enabled: Up to 9,216bytes.
MAC Address: 8K MAC
Packet Buffer: 2Mbits

Management

Configuration: Cisco-Like CLI, Web, SSL, SSH, Backup/ Restore, DHCP Client, Warm reboot, Reset to default, Admin password, Port Speed/Duplex control, status, statistic, MAC address table display, Static MAC, Aging time, Dual Firmware images
Jumbo Frame Enable/Disable: up to 9,216KBytes
LLDP: Link Layer Discovery Protocol to advertise system/ port identity and capability on the local network
SNMP: SNMP v1, v2c, v3 and Traps.
SNMP MIB: MIB-II, Bridge MIB, VLAN MIB, SNMP MIB, RMON and Private MIB
SNTP: Simple Network Time Protocol to synchronize time
Port Mirroring: Online traffic monitoring
Port Trunk: Static Trunk and 802.3ad LACP , Up to 12 Trunk Group, 2-8 ports per trunk
Rate Control: Ingress and Egress rate limiting
VLAN: IEEE802.1Q VLAN, GVRP. Up to 255 VLANs
Private VLAN: Direct client ports to uplink port
Protocol VLAN: 802.1v Protocol based VLAN
VLAN Stacking: Double VLAN tag (QinQ)
Quality of Service: Four priority queues per port, IEEE802.1p COS and Layer 3 TOS/DiffServ
IGMP Snooping: IGMP Snooping V1/V2 for multicast filtering and IGMP Query
MVR: Multicast VLAN Registration
Port Security: Assign authorized MAC to specific port
IP Security: IP security to prevent unauthorized access
802.1x: Port_based Network Access Control
Access Control List(ACL): Layer 2+ ACL Security
RADIUS/TACACS Authentication, Authorization, Accounting
DHCP Option 82
E-mail Warning: Automatic warning by pre-defined events
Syslog: Message logged to flash with different policy

Network Redundancy

Rapid Spanning Tree Protocol: 802.1w RSTP, compatible with Legacy STP
Multiple Spanning Tree Protocol: IEEE802.1s MSTP each MSTP instance can include one or more VLANs.

Interface

Number of Fixed Gigabit Ports:
10/100Base-TX: 24 x RJ-45, Auto MDI/MDI-X, Auto Negotiation
10/100/1000Base-TX: 4 x RJ-45, combo with SFP
1000Base-X: 4 x SFP with Hot Swappable
Cables:
10Base-T: 2-pair UTP/STP Cat. 3, 4, 5 cable (100m)
100 Base-TX: 2/4-pair UTP/STP Cat. 5 cable (100m)
1000 Base-T: 4-pair UTP/STP Cat. 5 cable (100m)
Diagnostic LED:
System: Power (Green), DIAG (Green)
10/100 RJ-45:
Link/Activity: Green = 100M, Yellow = 10M;
Duplex: On = Full, Off = Half
Gigabit Copper/SFP:
Link/Activity: Green = 1000M, Yellow = 10M or 100M;
Duplex: On = Full, Off = Half
RS232 Console: DB9 Connector, Pin3: TxD, Pin2: RxD, Pin5:GND
Power: 1 sets of AC inputs
FAN-less

Power Requirements

Power: 100-240V AC power input
Power Consumption: Maximum 20 Watts

Mechanical

Installation: 19-inch, 1U Rack Mount
Dimension: 44mm(H) x 438mm (W) x 170mm (D)
Weight: 2.65 kg with package

Environmental

Operating Temperature: -10 ~ 50°C
Operating Humidity: 5% ~ 95% (non-condensing)
Storage Temperature: -40 ~ 70°C

Regulatory Approvals

EMI: FCC Class A, CE/EN55022. Class A
EMS: EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11
Safety: cUL (CSA22.2, UL60950-1)
Shock: IEC60068-2-29
Vibration: IEC60068-2-6
Free Fall: IEC60068-2-32
Warranty: 3 years

Ordering Information

JetNet 5228G 19-inch 24+4G Industrial Managed Ethernet Switch

Includes:

- JetNet 5628G (no SFP transceivers)
- Rack Mount Kit
- Power Cord
- Console Cable
- Quick Installation Guide
- Document CD

Optional Accessories

Gigabit Multi-Mode SFP Transceiver

Gigabit Single-Mode SFP Transceiver

Gigabit BIDI/WDM Single-Mode SFP Transceiver

JetNet 5010G

Industrial 7+3G Gigabit Managed Ethernet Switch



CE FC cULus LISTED RoHS

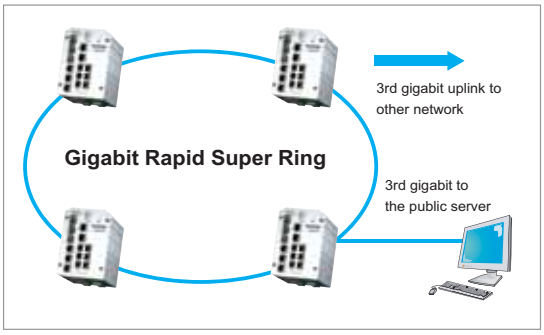
- 7 10 / 100-TX ports and 3 Gigabit RJ-45/SFP combo ports (10 / 100 / 1000 Base-TX, 100 Base-FX, 1000 Base-X)
- Multiple Super Ring (recovery time ≤5ms), Rapid Dual Homing, Multiple Ring, and RSTP
- VLAN, GVRP, QoS, IGMP Snooping V1/V2/V3, Rate Control, Port Trunking, LACP, Online Multi-Port Mirroring
- 32Gbps Non-Blocking, 8K MAC address table
- Supports console CLI , Web, SNMP V1/V2c/V3, RMON, HTTPS, SSH and JetView
- Advanced security feature supports IP Security, Port Security, DHCP Server, IP and MAC Binding, 802.1x network access control
- Event Notification by E-mail, SNMP trap, Syslog, Digital Input and Relay Output
- Rigid Aluminum Case complies with IP31, Great heat dispersing, Redundant power
- DIN-Rail/Wall-Mounting/Desktop Installation
- -20~70°C operating temperature for hazardous environment application

Overview

The JetNet 5010G is a Managed Industrial Ethernet Switch, equipped with 7 ports 10/100TX and 3 ports 10/100/1000 RJ-45/100-FX/Gigabit SX/LX combo ports. The 2 gigabit ports are used to form the nonstop Rapid Super Ring. The 3rd gigabit port is used to connect the upper switch, couple ring or public server. The gigabit combo port design giving flexibility to choose copper or fiber media, 100Base-FX or 1000Base-X, multi-mode or Single-Mode for different distance and without stocking different switch models. The JetNet 5010G is designed as rugged surface in aluminum material, curvilineal heating dispersing mechanical design and with wide operating temperature. The embedded software supports full Layer 2 management features, multi-form ring redundancy, network control, monitor, security and notification. The JetNet 5010G also provides builtin watchdog timer, digital input and relay output to avoid undetected damage. With JetNet 5010G, you can fulfill the dream of having the perfect solution to construct your industrial Ethernet infrastructure.

3rd Gigabit Uplink for Flexible Network Planning

JetNet 5010G offers three Gigabit RJ-45/SFP combos which improve the performance dramatically compared to typical two Gigabit RJ-45/ SFP combos. Each combo comes with flexible connectivity, 100Mbps Single-Mode/Multi-Mode or 1000Mbps Single-Mode/Multi-Mode, as well as a copper connection. Now, end-users can achieve as many as 10 different combinations of port connections. Also, by selecting a suitable range of fiber transceivers, the JetNet5010G can fulfill your industrial applications at long distances.



100 / 1000Mbps SFP Supported

The JetNet 5010G SFP socket supports 100Base-FX Single/Multi-Mode and 1000Base-SX/LX/LHX/XD Multi/Single-Mode transceiver. The available distance of the 100Base-FX is up to 30KM. 1000Base-SX Multi-Mode supports 550M, 1000Base-LX Single-Mode supports 10KM, 1000Base-LHX Single-Mode supports 30KM, 1000Base-XD Single-Mode supports up to 50KM. 1000Base-ZX Single-Mode supports up to 70KM.



Comprehensive Redundant Solutions — Multiple Super Ring (MSR™)

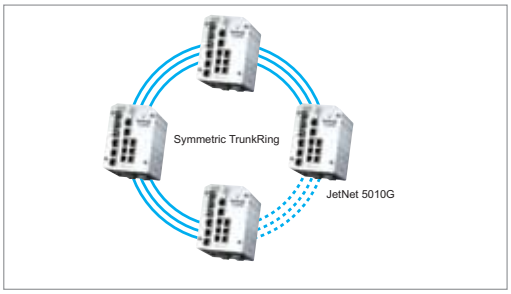
The JetNet 5010G supports MSR™ (Multiple Super Ring); the new generation of RSR (Rapid Super Ring) technology. This new technology includes various new features for different network redundancy applications and structures. With the MSR™ technology, a node can be configured to multiple rings with the failover time in as little as 5ms and ZERO-second of restore time. In addition, users can extend the ring topology by adding hundreds of JetNet 5010G to meet the network needs without compromising the speed of the network.

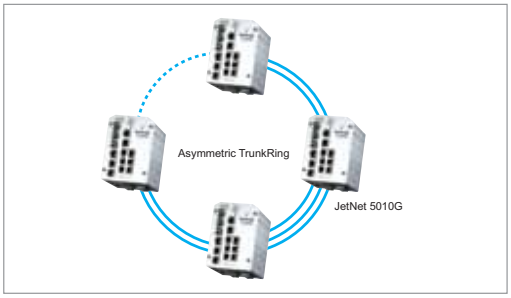
The MSR™ also facilitates the JetNet 5010G to connect with core management switch via standard Rapid Spanning Tree Protocol or through multiple paths or nodes to increase the reliability of the Rapid Dual Homing (RDH™) Technology. By integrating MSR™ and Link Aggregation Control Protocol (LACP), the JetNet 5010G can enhance the link availability and increase the link capacity. Two or more Fast Ethernet connection are bundled in order to increase the bandwidth and to create a resilient and redundant links.

TrunkRing™

Symmetric TrunkRing™ Asymmetric TrunkRing™

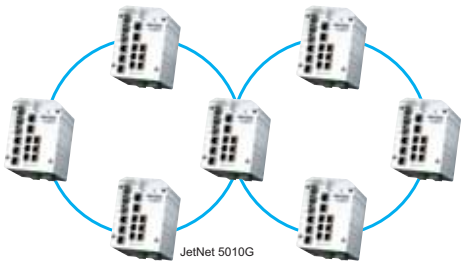
TrunkRing™ is a new feature in MSR™ which merges the two technologies of RSR and link aggregation. It takes advantage of aggregation to enhance the link redundancy, while increasing the link speed. The ring will open only if all the aggregated links are broken. Link aggregation can be achieved by either, static trunk or LACP protocol. Not all the link sections in a TrunkRing™ need to be the same. Ring links can be either symmetric or asymmetric. Some are a single link, and the others are aggregated by links where the number of links in a trunk group can be different. Users can enhance the link redundancy at different locations in accordance to the need. And the link with less speed is more likely to be used as the backup path for restoring the network to full play capacity.



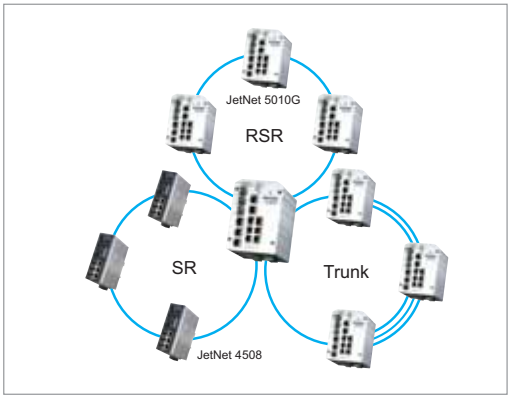


MultiRing™

MultiRing™ provides easier connectivity between two ring networks. The simplest example is to connect two rings by a single device. Depending on the number of ports, a device can even gather multiple rings together. As shown in the figure, MultiRing™ technology simply extends the network topology by linking multiple rings into a line or into multiple directions. In addition to extensibility, MultiRing™ has great diversity of various ring technologies. With MultiRing™ enabled, a device can connect RSR rings, TrunkRing™ and a ring of Super Ring together. Which provides extensibility to new technologies while keeps the great backward compatibility.

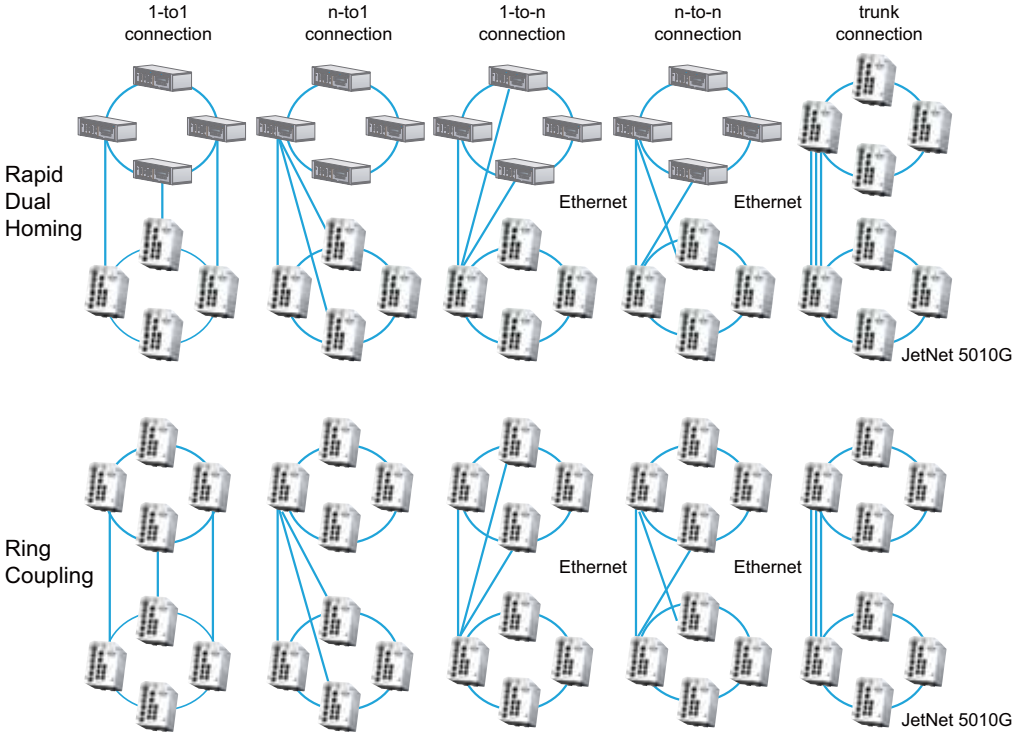


Simply connect 2 rings by a device



Rapid Dual Homing (RDH™) Technology

Rapid Dual Homing (RDH™) replaces DualHoming II and can be used for ring coupling. While keeping easy configuration and multiple redundancies, the failover time is much faster (less than 50 ms) and the restore time is ZERO (seamless restoration). Uplinks can be auto detected and gathered into groups. In each group, uplinks are sorted into Primary, Secondary, and Standbys by their link speed. The uplink with the highest speed is more likely to be the active path for data transmission. Link aggregation is also integrated into RDH™. An uplink can be a link or several links aggregated as a trunk, which provides better redundancy and link capacity.

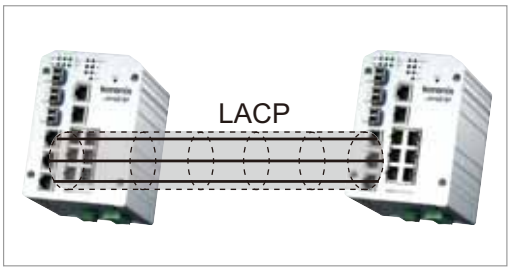


Various Network Control and Security Features

The JetNet 5010G provides various network control and security features. The Network Control feature allows users to optimize their industrial environment. The supported features include VLAN, IGMP Snooping, Quality of Service (QoS), Link Aggregation Control Protocol (LACP), Rate Control. The security also helps users to avoid hackers' attack. The features included are, DHCP Server, IP and MAC Binding, 802.1x Access Control, SSH, IP Access Table and Port Security.

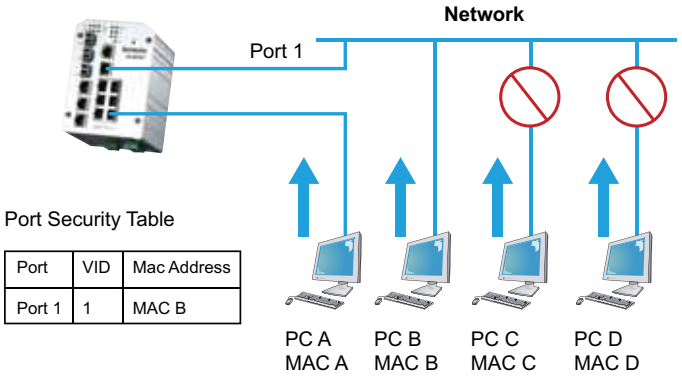
Link Aggregation Control Protocol

Link Aggregation Control Protocol (LACP) allows you to group multiple Ethernet ports in parallel to increase the link bandwidth. The aggregated ports can be considered as one physical port, so that the bandwidth is higher than just one single Ethernet port. The member ports of the same trunk group can balance the loading and backup with each other. The LACP feature is usually used when you need higher bandwidth for the backbone network. This is an inexpensive way for users to transfer much more data. If the trunk port is also assigned as a ring port, it will become as a TrunkRing™, which means, that the bandwidth of ring path has increased with port trunk technology. Now, there is no recovery time when failures occur. The JetNet 5010G provides a simple and easy way to aggregate port bandwidth into Rapid Super Ring.



Port Security

Port Security is an enhanced security feature provided by JetNet 5010G. Port Security is also known as, "Port and MAC Binding". The users can bind a specific MAC address to a specific port, add the MAC and Port binding entry/entries to the port security table. After enabling this, only the PC with the available MAC address can access the network through the switch. The other PCs can't even pass the traffic through the port.

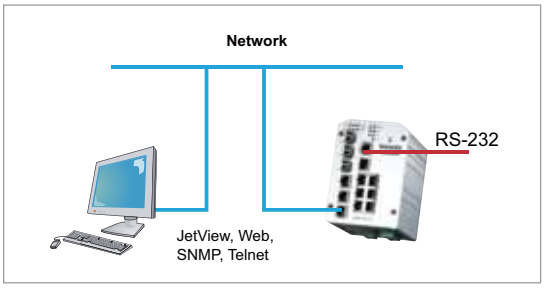


Port Security Table

Port	VID	Mac Address
Port 1	1	MAC B

Easy-to-Configure Network Management Features

The JetNet 5010G also provides users many advanced management features. It can be configured smartly by JetView, Web browser, SNMP, Telnet and RS-232 console Command Line Interface (CLI).
It provides Failure notification by E-mail, SNMP Trap, System Log, Digital Input and Fault Relay. The JetNet 5010G also supports Built-In Watchdog Timer for system recovering when detecting CPU failure.



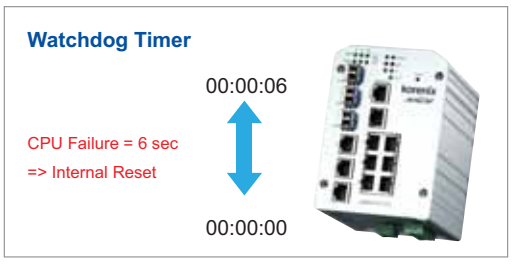
JetView, Easy Management Utility

The JetView is a convenient tool to help administrators to discover the JetNet series Switches. It supports group IP assignment, group firmware, upgrade, group configuration backup and restore.



A Built-in Watchdog Timer

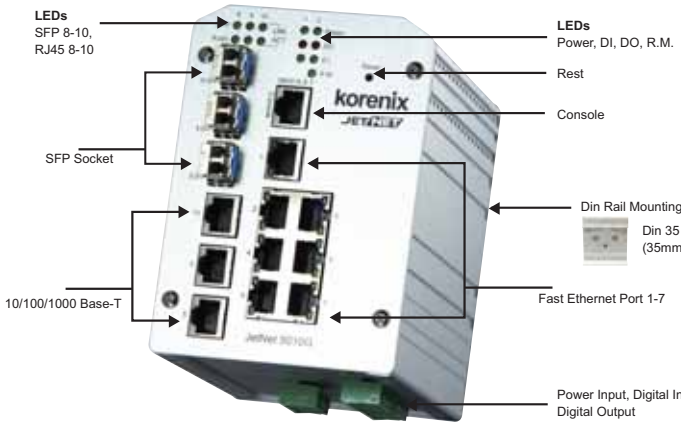
With a Built-In Watchdog Timer, the JetNet 5010G performs a warm boot (restarting the switch) automatically when the switch system locks up. It saves the effort of maintenance for keeping network alive if the switch can recover by itself.



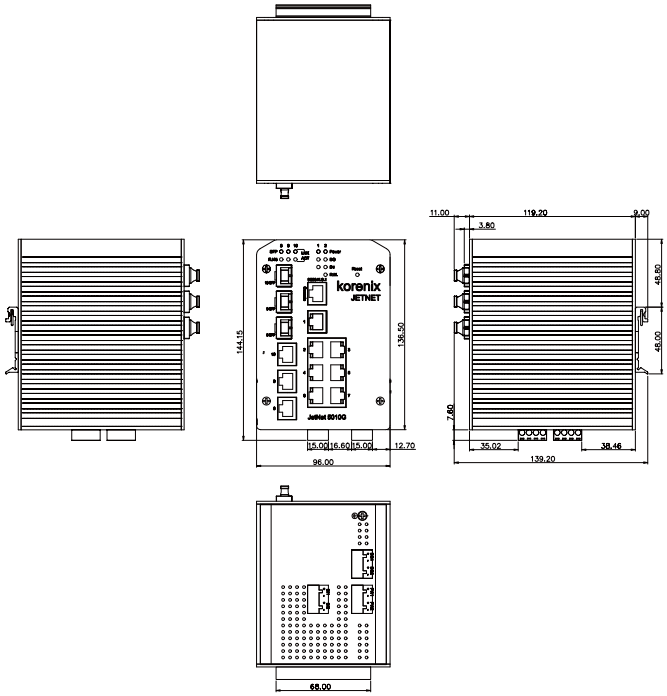
Robust Mechanism Design

Korenix JetNet 5010G's outstanding outlook is rock solid and fashionable with strong functionality. Using aluminum extrusion case with industrial quality, IP 31 class of protection, light weight, rigid shell and excellent thermal conductivity units can operate under harsh industrial environment reliably.

JetNet 5010G Appearance



Dimensions (Unit –mm)



Specification

Technology

Standard:
IEEE 802.3 10Base-T Ethernet
IEEE 802.3u 100Base-TX Fast Ethernet
IEEE 802.3ab 1000Base-TX
IEEE 802.3z Gigabit Ethernet Fiber
IEEE 802.3x Flow Control and Back-pressure
IEEE 802.1p class of service
IEEE 802.1Q VLAN and GVRP
IEEE 802.1D-2004 Rapid Spanning Tree Protocol (RSTP)
IEEE802.3ad LACP
IEEE802.1X Port_based Network Access Control

Performance

Switch Technology:
Store and Forward Technology with 32Gbps Switch Fabric.
System Throughput: 14,880pps for 10M Ethernet, 148,800pps for 100M Fast Ethernet, 1,488,100 for Gigabit Ethernet
Transfer packet size: 64 bytes to 1522 bytes (with VLAN Tag)
MAC Address: 8K MAC
Packet Buffer: 1Mbits
Relay Alarm: Dry Relay output with 1A@24V ability

Management

Configuration: Cisco-Like CLI, JetView, Web, HTTPS, SSH; TFTP/Web Update for firmware and configuration backup/restore, DHCP Client, Warm reboot, Reset to default, Admin password, Port Speed/Duplex control, status, statistic, MAC address table display, Static MAC, Aging time, **SNMP v1, v2c, v3**, Traps and RMON1.
SNMP MIB: MIB-II, Bridge MIB, VLAN MIB, SNMP MIB, RMON and Private MIB
Port Trunk: Up to 5 Static Trunk and IEEE802.3ad LACP
VLAN: IEEE802.1Q VLAN, GVRP. Up to 64 VLAN groups
Quality of Service: Four priority queues per port, IEEE802.1p COS and Layer 3 TOS/DiffServ
IGMP Snooping: IGMP Snooping V1/V2/V3 for multicast filtering and IGMP Query V1/V2
Rate Control: Ingress filtering for Broadcast, Multicast, Unknown DA or All packets, and Egress filtering for All packets
NTP: Network Time Protocol to synchronize time from Internet or local PC
Embedded Watchdog: Embedded hardware watchdog timer to auto reset system when switch system failure
Port Mirroring: Online traffic monitoring on multiple selected ports
Port Security: Assign authorized MAC to specific port
IP Security: IP security to prevent unauthorized access
802.1x: Port_based Network Access Control
DHCP Server: Up to 255 IP address, support IP and MAC binding
E-mail Warning: Automatic warning by pre-defined events
System Log: Supports both Local mode and Server mode

Network Redundancy

Rapid Spanning Tree Protocol: IEEE802.1D-2004 Rapid Spanning Tree Protocol. Compatible with Legacy STP and IEEE802.1w.
Rapid Super Ring(RSR): 2nd generation Korenix Ring Redundancy Technology. Failure recovery within 5ms.
Rapid Dual Homing (RDH™): Multiple uplink paths to upper switches
MultiRing™: Couple or multiple Rapid Super Rings
Legacy Super Ring: Backward compatible in client mode

Interface

Number of Ports: 10/100TX: 7 x RJ-45, Auto MDI/MDI-X, Auto Negotiation
10/100/1000TX: 3 x RJ-45, combo with SFP
Gigabit Fiber/100Base-FX: 3 x SFP with Hot Swappable
Cables:
10Base-T: 2-pair UTP/STP Cat. 3, 4, 5 cable (100m)
100 Base-TX: 2/4-pair UTP/STP Cat. 5 cable (100m)
1000 Base-T: 4-pair UTP/STP Cat. 5 cable (100m)
Diagnostic LED:
10/100 RJ-45: Link/Activity(Green), Full duplex/Collision (Yellow)
Gigabit Copper/SFP: Link/Activity(Green)
Unit: Power(Green), Digital Out(Red), Digital Input(Green), R.M.(Green)
RS232 Console: RJ-45 Connector, Pin3: TxD, Pin6: RxD, Pin5:GND
Power: 2 sets of power Inputs
Digital Input: 2 sets of Digital Input
Logic Low (0): 0-10VDC/Logic High(1): 11-30VDC
Alarm: 2 sets of Relay outputs for pre-defined events
Reset: Reset button is provided to restore default settings

Power Requirements

System Power: 12~48V/-12~-48VDC with Reverse Polarity Protection
Power Consumption: 11.5 Watts @ DC 48V

Mechanical

Installation: DIN-Rail mount or Wall Mount
Case: IP-31 protection, aluminum metal case
Dimension: 137mm(H) x 96mm (W) x 119mm (D)
Weight: 0.915kg with package

Environmental

Operating Temperature:-20 ~70°C
Operating Humidity: 0% ~ 95% (non-condensing)
Storage Temperature: -40 ~ 85°C
Hi-Pot: 1.2KV for ports and power

Regulatory Approvals

EMI: FCC Class A, CE/EN55022. Class A
EMS: EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11
Safety: UL/cUL 60950
Shock: IEC60068-2-27
Vibration: IEC60068-2-6
Free Fall: IEC60068-2-32
MTBF:249,683 Hours, MIL-HDBK-217F GB standard
Warranty: 5 years

Ordering Information

JetNet 5010G Industrial 7+3G Gigabit Managed Ethernet Switch

Includes:

- JetNet 5010G(without SFP transceiver)
- Wall mounting plate
- Quick Installation Guide
- Documentation CD-ROM
- Console cable

Optional Accessories

100Base-FX Multi-Mode SFP Transceiver

100Base-FX Single-Mode SFP Transceiver

100Base-FX BIDI/WDM Single-Mode SFP Transceiver

Gigabit Multi-Mode SFP Transceiver

Gigabit Single-Mode SFP Transceiver

Gigabit BIDI/WDM Single-Mode SFP Transceiver

JetNet 5008G-P

Industrial 6+2G Gigabit Embedded Managed Switch Board



RoHS

- Independable Embedded Managed Switch Board with 200mm (W) x 140mm(D) x30mm(H) board size
- 6 10/100Base-TX and 2 Gigabit RJ-45/SFP combo ports
- Internal Gigabit Ethernet port for your system connectivity
- 11.5 Watts lower power consumption at DC48V
- Watchdog timer for unexpected failure
- Supports Rapid Super Ring, MSR™, RSTP, VLAN, GVRP, QoS, IGMP Snooping V1/V2/V3, Rate Control, Port Trunking, LACP, Online Multi-Port Mirroring
- Supports Web, SNMP V1/V2c/V3, RMON, HTTPS and SSH management
- Advanced security feature supports IP Security, Port Security, DHCP Server, IP and MAC Binding, 802.1x network access control
- Redundant Power Input DC12~48V
- 2 Dry Relay Output for Ethernet Switch

Overview

The JetNet 5008G-P is an Embedded Managed Switch Board, also known as EMSB. The board is designed with six 10/100-TX and two RJ-45/SFP combo front ports, one internal port for system connectivity and management. The EMSB is specially designed to combine with your embedded task-specific system. The board size is just 200mm (W) x 140mm (D) x 30mm (H), giving flexibility and compatibility in system integrating.

To enlarge your system value, JetNet 5008G-P provides abundant embedded value-added features. The layer 2 management features include multi-form ring redundancy, network control, management, monitor, security and notification. The JetNet 5008G-P also provides built-in watchdog timer to avoid undetected damage. With JetNet 5008G-P EMSB, you can easily integrate the board with your existing embedded system.

EMSB- Designed for Embedded System

JetNet 5008G-P is an Embedded Managed Switch Board (EMSB), can easily apply to your task-specific embedded system. 6 + 2 Gigabit RJ-45/SFP combo front ports and one internal port can connect or control the EMSB by Web UI, Telnet, SNMP and JetView. JetNet 5008G-P is also designed with dual 12-48VDC terminal block on board for low power requirements. The embedded power supply of the system can boot up the two independent systems easily.

A Win / Win Flexible OEM Solution

By providing a variety of tailor-made products and services, Korenix, the pioneer of Industrial Ethernet switching, has the leading technology to fulfill your needs and demands. Our business goal is to let our customers spend less time and less money on their applications.

We offer switch board OEM/ODM services, including conformal coating for hazardous environment as well as wide-ranged fiber connection for lengthy network distance. Our working experience and in-depth know-how of industrial networking communications, has enabled us to combine Taiwan's research/ development ability with competitive production cost; hence, producing the most high performing and cost effective product in the market.

All Korenix products not only include a five years warranty, but a life-time online tech supports from experienced and well-trained technicians.

Non-Stop Network Transmission

A key element of a perfect embedded board is its reliability and compatibility. The JetNet 5008G-P is highly compatible with every vendor's equipment currently available in the market. Every JetNet 5008G-P comes with a built-in watch dog timer to maintain a non-stop operation. With RSTP over Rapid Super Ring (RSR) and Dual Homing II technology, the JetNet 5008G-P will automatically select an alternative route to transmit the data if the original route has been blocked and notify the administrator simultaneously.

With Rapid Super Ring, your network data is always transferred between switches via Gigabit ports with failover time in as low as 5ms; most importantly, the security of your data is never jeopardized. Furthermore, JetNet 5008G-P always remains operational from the disturbance of vibration, impact of shock, and environment of hazardous temperature (-20~70°C). Taking advantages of JetNet 5008G-P can help you to build up a network that is technically impossible to disconnect.

Easy-to-Configure Managing Software

JetNet 5008G-P switch board fully supports many known network management software such as HP Open View, MG-Soft, SNMPc, and the leading OPC server – Kepware's KEPServerEX. It provides users with many advanced managed functions including SNMP v1/v2c/v3, IGMP snooping v1/v2/V3, VLAN, QoS, Rate control, Port Trunk, LACP, 802.1x, DHCP Server, Port security and IP security, and more. These functions can be configured easily by CLI, SNMP and web browser. JetNet 5008G-P will fulfill your system requirements and network needs, and our software will save you time and efforts for your product development simultaneously. With Rapid Super Ring, your network data is always transferred between switches via Gigabit ports with failover time in as low as 5ms; most importantly, the security of your data is never jeopardized. Furthermore, JetNet5008G-P always remains operational from the disturbance of vibration, impact of shock, and environment of hazardous temperature (-25~70°C). Taking advantages of JetNet 5008G-P can help you to build up a network that is technically impossible to disconnect.

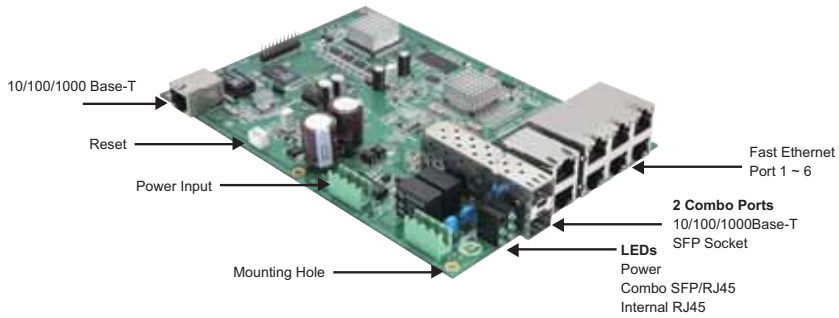
Power Consumption

The JetNet 5008G-P has an incredibly low power consumption of 11.5 Watts at DC48V and Dual Power Input, 12~48V/-12~-48V DC with Reserve Polarity Protection.

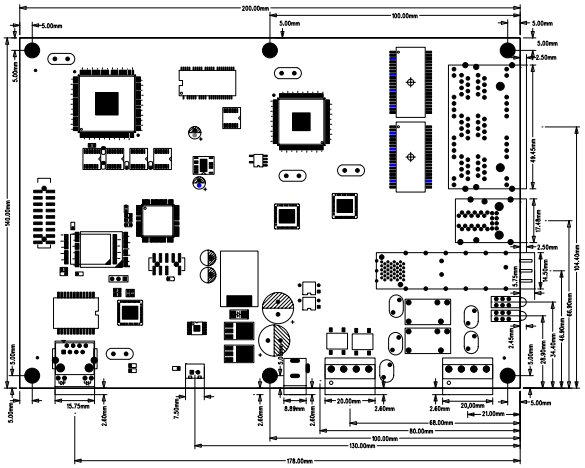
System Reliability

Watch Dog Timer is the network lifeguard that has a separate CPU watching over the switch. When the switch is locked up or any type of network failure occurs, it will perform a warm boot to restart on the switch; thus the recovery action will save time & efforts for network administrator.

JetNet 5008G-P Appearance



Dimensions (Unit=mm)



Specification

Technology

Standard: IEEE 802.3 10Base-T Ethernet
IEEE 802.3u 100Base-TX Fast Ethernet
IEEE 802.3ab 1000Base-TX
IEEE 802.3z Gigabit Ethernet Fiber
IEEE 802.3x Flow Control and Back-pressure
IEEE 802.1p class of service
IEEE 802.1Q VLAN and GVRP
IEEE 802.1D-2004 Rapid Spanning Tree Protocol (RSTP)
IEEE802.3ad LACP
IEEE802.1X Port_based Network Access Control

Performance

Switch Technology: Store and Forward Technology with 32Gbps Switch Fabric
System Throughput: 14,880pps for 10M Ethernet, 148,800pps for 100M Fast Ethernet, 1,488,100 for Gigabit Ethernet
Transfer packet size:
64 bytes to 1522 bytes (with VLAN Tag)
MAC Address: 8K MAC
Packet Buffer: 1Mbits
Transfer performance: 14,880pps for Ethernet and 148,800 for Fast Ethernet and transfer packet size from 64 to 1522Bytes.

Management

Configuration: Cisco-Like CLI, Web, DHCP Server/Client, warm reboot, reset to default, Admin password, Port Speed/ Duplex Control, status, statistic, MAC address table display, static MAC, Aging time, SNMP v1, v2c, v3, Traps and RMON1
SNMP MIB: MIB-II, Bridge MIB, VLAN MIB, SNMP MIB, RMON and Private MIB
Port Trunk: Up to 5 Static Trunk and 802.3ad LACP
VLAN: 802.1Q VLAN, GVRP. Up to 64 VLAN groups
Quality of Service: Four priority queues per port, 802.1p COS and Layer 3 TOS/DiffServ
IGMP Snooping: IGMP Snooping V1/V2/V3 for multicast filtering and IGMP Query V1/V2
Rate Control: Ingress filtering for Broadcast, Multicast, Unknown DA or All packets and filtering for All packets.
NTP: Network Time Protocol to synchronize time from internet or local PC
Embedded Watchdog: Embedded hardware watchdog timer to auto reset system when failure occurred
Port Mirroring: Online traffic monitoring on multiple selected ports
Port Security: Port security to assign authorized MAC to specific port
IP Security: IP security to prevent unauthorized access
802.1x: Port_based Network Access Control
DHCP Server: Up to 255 IP address, support IP and MAC binding
E-mail Warning: SMTP warning by pre-defined events
System Log: Supports both Local mode and Server mode

Network Redundancy

Rapid Spanning Tree Protocol:
IEEE802.1D-2004 Rapid Spanning Tree Protocol. Compatible with Legacy STP and IEEE802.1w.
Multiple Super Ring(MSR™): 2nd generation Korenix Ring Redundancy Technology. Failure recovery within 5ms.
Rapid Dual Homing (RDH™): Support multiple node to node, multiple path to one node to obtain more flexible and reliable architecture
TrunkRing™: Provides port aggregate function in ring path to get more bandwidth for higher throughput ring architecture
Multiple Ring: New generation of ring coupling technology without extra control port - TangentRing

Interface

Number of Ports:
10/100TX: 6 x RJ-45, Auto MDI/MDI-X, Auto Negotiation
10/100/1000TX: 2 x RJ-45 on front side, 1 x inner port.
SFP: 2 x Hot- Swappable SFP and combo with Gigabit RJ-45
Cables: 10Base-T: 2-pair UTP/STP Cat. 3, 4, 5 cable, EIA/TIA-568 100-ohm (100m)
100 Base-TX: 2/4-pair UTP/STP Cat. 5 cable, EIA/TIA-568 100-ohm (100m)
1000 Base-T: 4-pair UTP/STP Cat. 5, Cat-5e cable, EIA/TIA-568 100-ohm (100m)
LED Indicators: 2 x Power (Green)
2 x SFP Link/Activity (Green)
Inner Port Link/Activity (Green)
System Power: 2 sets of power Input within 4-pin removable terminal block
Reset: Reset PIN is provided to restore default settings
Relay: 2 Dry relay outputs with 1A/DC24V carry ability
Reset: Internal connector is provided for chassis installation

Power Requirements

System Power: Dual Power Input, 12~48V/-12~-48V DC with Reverse Polarity Protection
Power Consumption: About 11.5 Watts @ DC 48V

Mechanical

Dimension: 30mm(H) x 200mm (W) x 140mm (D)
Weight: 0.50kg without package and case

Environmental

Operating Temperature:-25 ~70°C
Operating Humidity: 0% ~ 95%, (non-condensing)
Storage Temperature: -40 ~ 85°C
Hi-Pot: 1.2KV for all ports and power

Regulatory Approvals

MTBF: 249,683 Hours, MIL-HDBK-217F GB standard
Warranty: 5 years

Ordering Information

JetNet 5008G-P 6+2G Gigabit Embedded Managed Switch Board

Includes:

- JetNet 5008G-P (without SFP transceiver)
- Documentation CD-ROM

JetNet 3018G (Preliminary)

Industrial 16+2G Gigabit Ethernet Switch



CE FC RoHS

- 16 10/100TX and 2 Gigabit copper/SFP combo ports
- Auto detect Gigabit Link Media
- Flexible Gigabit Fiber Link Distance
- High performance up to 12.8Gbps non-blocking bandwidth
- Supports Auto MID/MDI-X with Flow control
- Jumbo Frame up to 9,216 Bytes
- IEEE802.1p for Quality of Service (QoS)
- Power redundancy with wide range input
- Relay Output Alarm for Gigabit uplink ports failure
- Rigid IP31 grade Aluminum Case
- -20~70°C operating temperature for hazardous environment application

Overview

The Korenix JetNet3018G is an unmanaged Industrial Switch, equipped with 16 RJ-45 10/100Mbps ports and 2 10/100/1000TX with 1000-SX SFP combo ports. The SFP ports accept all types of Gigabit SFP Transceivers, such as Gigabit SX, LX, LHX, ZX and XD for several connections and distances. The JetNet 3018G also supports Jumbo frame transmission, up to 9216-bytes packet size, which is crucial especially while the industrial applications requesting the transmission with large size files. The JetNet 3018G adopts the rigid aluminum case, the unique Korenix-Design, which is the right option for the hazardous environments.

The Flexible Gigabit RJ-45/SFP Combo Ports

The JetNet 3018G is equipped with two Gigabit RJ-45/SFP combo ports. Each Gigabit port combines a small form factor pluggable SFP (mini-GBIC port to accommodate 1000Base-SX or 1000Base-LX connectivity) and a RJ-45 Gigabit copper port. The switch will automatically detect the priority of the Gigabit cable connections for each Gigabit port. The fiber SFP module with various ranges of fiber transceivers is capable to fulfill the tailor made industrial applications greatly. Moreover, Korenix equips 2 relay outputs to deliver alarms while the Gigabit RJ-45/SFP ports failing.

High Performance and Jumbo Frame

The JetNet 3018G supports 16 Fast Ethernet ports plus 2 Gigabit uplink ports which can provide 12.8G non-blocking bandwidth and performance. The gigabit interface is used to act as the uplink path as the lower 10/100 ports have bigger uplink bandwidth. Unlike pure 10/100 High Ports Switch, the uplink ports may not easily be the bottleneck of the transmission. Considering the industrial application requirements, the JetNet 3018G enables the Jumbo frame supported by default. The jumbo frame, which is up to 9,216 bytes, divides the large files into less packet frames. Thus, the gaps between the frames become fewer, and the packet transmitting becomes more efficiency.

Quality of Service

The JetNet 3018G focuses on the entry level applications which allocate numerous Fast Ethernet devices and provide higher bandwidth to Gigabit Backbone Switch.

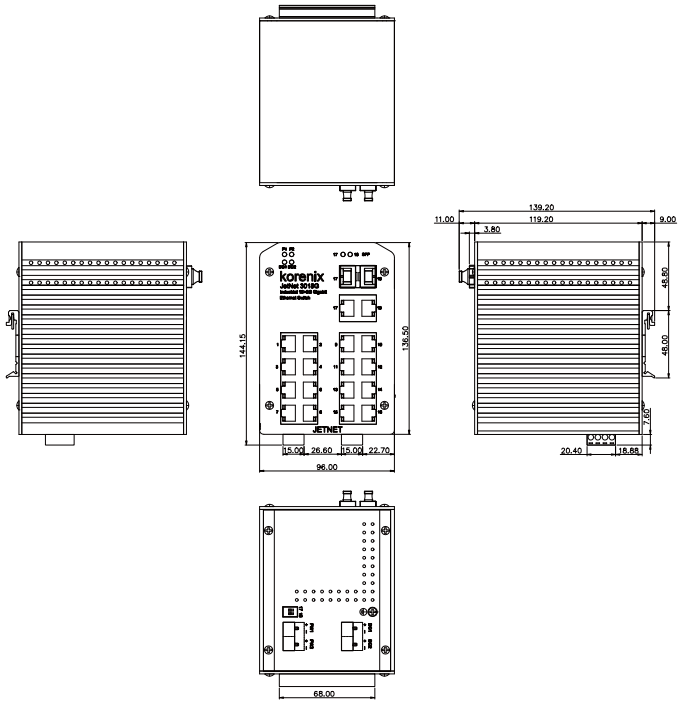
The IEEE802.1p Quality of Service (QoS) mechanism enlarges and extends the performance of networking transmissions on the field sites.

Hazardous Environment Application

To survive in harsh environments, the JetNet3018G is well-designed with the wide range redundant power input with rigid housing, supporting the IP31 aluminum case with -20~70°C system operating temperature, providing excellent heat radiation.

Furthermore, Korenix also delivers you the certified SFP fiber transceivers with the same operating temperature for the JetNet 3018G and saves the purchase time consuming without quality concerns and issues.

Dimensions (Unit –mm)



Specification

Technology

Standard:
IEEE802.3 10Base-T
IEEE802.3u 100Base-TX
IEEE802.3ab 1000Base-T
IEEE802.3z Gigabit Ethernet
IEEE802.3x flow control and back pressure
IEEE802.1p Class of Service
Switch Technology:
Store and Forward Technology, up to 12.8Gbps High System Throughput
MAC Address: 8K MAC address table
System Packet Buffer: 2Mbits shared packet buffer
Jumbo Frame: Enable Jumbo Frame, Up to 9,216 bytes
Quality of Service: Compliance with IEEE802.1p class of service with Tag Based Priority rule.
Each switch port provides 4 priority queues as following - 8 (Higher) : 4(High) : 2(Low) :1(Lower) scheduling.
The Tag Priority ID as following: Highest (6,7), High (4,5), Low (0,3), Lowest (1,2)

Interface

Number of Ports: 16 x 10/100 Base-TX with Auto MDI/MDI-X function, ,Auto-Negotiation
2 x 1000Base-T supports Auto MDI/MDI-X , Auto-Negotiation function and combo with Small Form Factor Package (SFP) socket
Connectors:
10/100 Base-TX: RJ-45
1000Base-T: RJ-45
SFP: supports all 3.3v SFP type Gigabit fiber transceiver
Power: 4-Pin Removable Terminal Block
Relay Output: 4-Pin Removable Terminal Block
Cables:
RJ-45 connector: supports CAT-3, CAT-4, CAT-5 unshielded twisted pair or shielded twisted pair cable. The maximum link distance is 100 meters

Diagnostic LED:
System Power: Power 1 (Green), Power 2 (Green)
Relay Output: Relay Output 1 (Red), Relay Output 2 (Red)
10/100 Mbps RJ-45 port: Link (Green/Left), Activity(Yellow Blinking/Right)
1000Base-T RJ-45 port: 10/100 Link (Green/Left), 1000 Link (Yellow/Right), Activity (Green Blinking/Yellow Blinking)
SFP port: Link/Activity (Green/Green Blinking)

Power Requirements

System Power: 4 pins terminal block for power input.
DC 24V (12~48V) with polarity reverse protection and redundant function
Power Consumption: 10Watt

Mechanical

Installation: DIN-Rail or Wall mount
Case:
Aluminum metal case with IP31 grade case protection for drop-waterproof and dustproof
Dimension: 137mm(H) x 96mm (W) x 119mm (D)
Weight: 1kg without package

Environmental

Operating Temperature: -20 ~70°C
Operating Humidity: 0% ~ 90%, (non-condensing)
Storage Temperature: -40 ~ 80°C
Storage Humidity: 0%~ 95%, (non-condensing)
Hi-Pot: 1.5KV on port to port and port to power

Regulatory Approvals

Maritime: DNV(Pending)
EMI: FCC Class A, CE/EN55022
EMS:
EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11
Vibration: IEC60068-2-6
Free Fall: IEC60068-2-32
MTBF: At least 200,000 hours @ 25°C
Warranty: 5 years

Ordering Information

JetNet 3018G Industrial 16+2G Gigabit Ethernet Switch

Includes:

- JetNet 3018G
- Quick Installation Guide
- CD User's manual

Optional Accessories

Gigabit Multi-Mode SFP Transceiver

Gigabit Single-Mode SFP Transceiver

Gigabit BIDI/WDM Single-Mode SFP Transceiver

JetNet 3010G

Industrial 10-port Gigabit Ethernet Switch



- 7 10/100 TX ports and 3 Gigabit RJ-45/SFP combo ports
- 32Gbps Switch Fabric with excellent data exchangeper formance
- Support 1.2KV Hi-Pot isolation protection
- Redundant power input DC 12~48V
- Auto Gigabit RJ-45/SFP module detection
- IEEE 802.1p for Quality of Service (QoS)
- Aluminum case with IP-31 grade protection
- -20~70°C operating temperature for hazardous environment application

Overview

The Korenix JetNet 3010G is an Unmanaged Industrial Switch, which is equipped 7 ports RJ-45 10/100Mbps and 3 ports Gigabit TX with SFP combo. The SFP ports are compatible with accept all of SFP types Gigabit SFP Transceiver, which could be Gigabit SX, LX, LHX, ZX and XD for several of connections and distances.

Flexibility — 1000Mbps SFP / Combo Ports

The 3 combo ports lead to the flexibilities and the conveniences for additional fiber connections with just plug-in different types of SFP modules, from 2KM multi-mode to 120KM single-mode. The combo ports also make the port-combination easier, such as 8 RJ ports and 2 fiber ports, or 9 RJ ports and 1 fiber port. The standard 10 port Fast Ethernet Switch greatly shortens normal long lead time by the special fiber switch model and reduces the total cost for fiber uplink network.



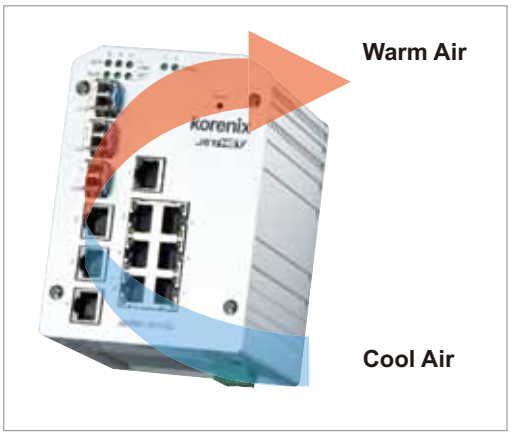
Quality of Service (QoS)

JetNet 3010G focus on the cost effective application which allocates lot of Fast Ethernet devices and provides higher bandwidth to Gigabit Backbone Switch or JetNet 3010G Gigabit Rapid Super Ring.

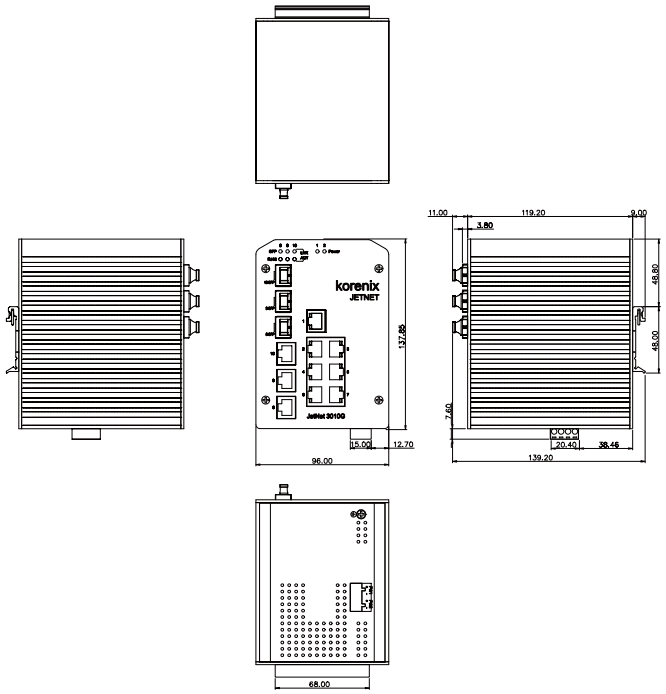
The 3.2Gbps Switch Fabric and IEEE802.1p Quality of Service (QoS) mechanism enlarge and extend filed site network transmission performance.

Brilliant Idea for Hazardous Environment Application
Robust Mechanism Design

Korenix JetNet 3010G's outstanding outlook is rock-solid and fashionable with strong functionality. The special fan-less heating dispersing mechanical design adapts the thermodynamic technique to ventilate heat generated from Ethernet module efficiently. Using aluminum extrusion case with industrial quality, IP 31 class of protection, light weight, rigid shell and excellent thermal conductivity units can operate under harsh industrial environment reliably.



Dimensions (Unit –mm)



Specification

Technology

Standard:
IEEE802.3 10Base-T
IEEE802.3u 100Base-TX
IEEE802.3ab 1000Base-T
IEEE802.3z Gigabit Ethernet Fiber
IEEE802.3x flow control and back pressure
IEEE802.1p Class of Service

Performance

Switch Technology:
Store and Forward Technology with 32Gbps Switch Fabric.
System Throughput: 14,880pps for 10M Ethernet, 148,800pps for 100M Fast Ethernet, 1,488,100 for Gigabit Ethernet
Transfer packet size: 64 bytes to 1522 bytes (with VLAN Tag)
MAC Address: 8K MAC address table
System Packet Buffer: 1Mbits shared packet buffer
Quality of Service:
Compliance with IEEE802.1p class of service with Tag Based Priority rule Per switch port provides 4 priority queues with 8 (Higher):4(High):2(Low):1(Lower) scheduling. The Tag Priority ID as following: Higher (6,7), High (4,5), Low (0,3), Lowest (1,2)

Interface

Number of Ports:
7 x 10/100 Base-TX with Auto MDI/MDI-X function Auto-Negotiation
3 x 1000Base-T supports Auto MDI/MDI-X , Auto-Negotiation function and combo with Small Form Factor Package (SFP) socket
Connectors:
10/100 Base-TX: RJ-45
1000Base-T: RJ-45
Port # 8, 9 10/100/1000 TX
Port # 10 1000 TX
SFP: supports all 3.3v SFP type Gigabit fiber transceiver
Power: 4-Pin Removable Terminal Block connector
Cables:
RJ-45 connector: supports CAT-3, CAT-4, CAT-5 unshielded twisted pair or shielded twisted pair cable. The link distance is maximum 100 meters
Diagnostic LED:
System Power: Power 1 (Green), Power 2 (Green)
10/100 Mbps RJ-45 port: Link/Activity (Green), Full Duplex/Collision (Yellow)
port: Link/Activity(Green)
1000Base-T RJ-45 port: Link/Activity (Green)
SFP port: Link/Activity (Green)

Power Requirements

System Power:
4 pins terminal block for power input.
DC 24V (12~48V) with polarity reverse protection and redundant function
Power Consumption:
11.5 Watts @ DC 24V(Maximum)

Mechanical

Installation: DIN-Rail or Wall mount
Case:
Aluminum metal case with IP31 grade case protection for drop-waterproof and dustproof
Dimension: 137mm(H) x 96mm (W) x 119mm (D)
Weight:
0.875g without package

Environmental

Operating Temperature: -20 ~70°C
Operating Humidity: 0% ~ 90%, (non-condensing)
Storage Temperature: -40 ~ 85°C
Storage Humidity: 0%~ 95%, (non-condensing)
Hi-Pot: 1.2KV for port and power

Regulatory Approvals

EMI: FCC Class A, CE/EN55022
EMS:
EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11
Safety: UL/cUL 60950
Shock: IEC60068-2-27
Vibration: IEC60068-2-6
Free Fall: IEC60068-2-32
MTBF: 267380 hours @ 25°C
Warranty: 5 years

Ordering Information

JetNet 3010G Industrial 10-Port Gigabit Ethernet Switch

Includes:

- JetNet 3010G(without SFP transceiver)
- Quick Installation Guide
- CD User's manual

Optional Accessories

Gigabit Multi-Mode SFP Transceiver

Gigabit Single-Mode SFP Transceiver

Gigabit BIDI/WDM Single-Mode SFP Transceiver

JetNet 4510

Industrial 10-port Managed Fast Ethernet Switch



- 7 10/100 Base TX and 3 RJ-45/SFP combo (10/100Base-TX, 100Base-FX)
- Multiple Super Ring (recovery time ≤5ms), Rapid Dual Homing, Multiple Ring, and RSTP
- VLAN, GVRP, QoS, IGMP Snooping V1/V2/V3, Rate Control, Port Trunking, LACP, Online Multi-Port Mirroring
- 32Gbps Non-Blocking, 8K MAC address table
- Supports console CLI , Web, SNMP V1/V2c/V3, RMON, HTTPS, SSH and JetView
- Advanced security feature supports IP Security, Port Security, DHCP Server, IP and MAC Binding, 802.1x network access control
- Event Notification by E-mail, SNMP trap, Syslog, Digital Input and Relay Output
- Rigid Aluminum Case Complies with IP31, Redundant power, DIN-Rail/Wall-Mounting/Desktop Installation

Overview

JetNet 4510 is an industrial Managed Fast Ethernet Switch, designed with 7-10/100TX and 3-10/100 RJ-45 / 100FX SFP combo ports.

The flexible 3 combo ports offer flexibility for additional fiber connections by plugging different types of 100MM SFP modules, which can support 2KM in Multi-Mode or 120KM in Single-Mode. The combo ports make port combination even easier, such as 8 RJ ports and 2 fiber ports, or 9 RJ ports and 1 fiber port. The standard 10 port Fast Ethernet switch greatly reduces total cost by up to 15% for fiber uplink network.

In addition to cost savings, the flexible design of the JetNet 4510 can adapt to the world's fastest Ring Technology by Korenix. It only takes 5ms to recover from link failure, no matter how many nodes are inside a ring, and the restore time is zero when the failed link is recovered. The patented Multiple Super Ring provides the most flexible ring topologies, such as shared link of multiple rings, or shared unit of multiple rings, making it the best possible. The Multiple Super Ring is highly compatible to Rapid Spanning Tree by the new Dual Homing plus design. JetNet 4510 also enhances security designs, such as SNMP V3, SSH, 802.1X, etc.

3 Flexible Fast Ethernet Combo Ports

The JetNet 4510 is designed with three combo Fast Ethernet ports. Each combo port combines one Small Form factor Pluggable (SFP) socket for 100Mbps multimode or single mode SFP transceiver, as well as one RJ-45 copper port in 10Mbps full duplex, 100Mbps half /full duplex link mode.

The switch will automatically detect the priority of cable connections for each combo port. Users are able to connect two 100Mbps SFP ports of JetNet 4510 as a Fast Ethernet Fiber Redundant Ring topology and the third combo port as a fiber uplink port or an applicable port.

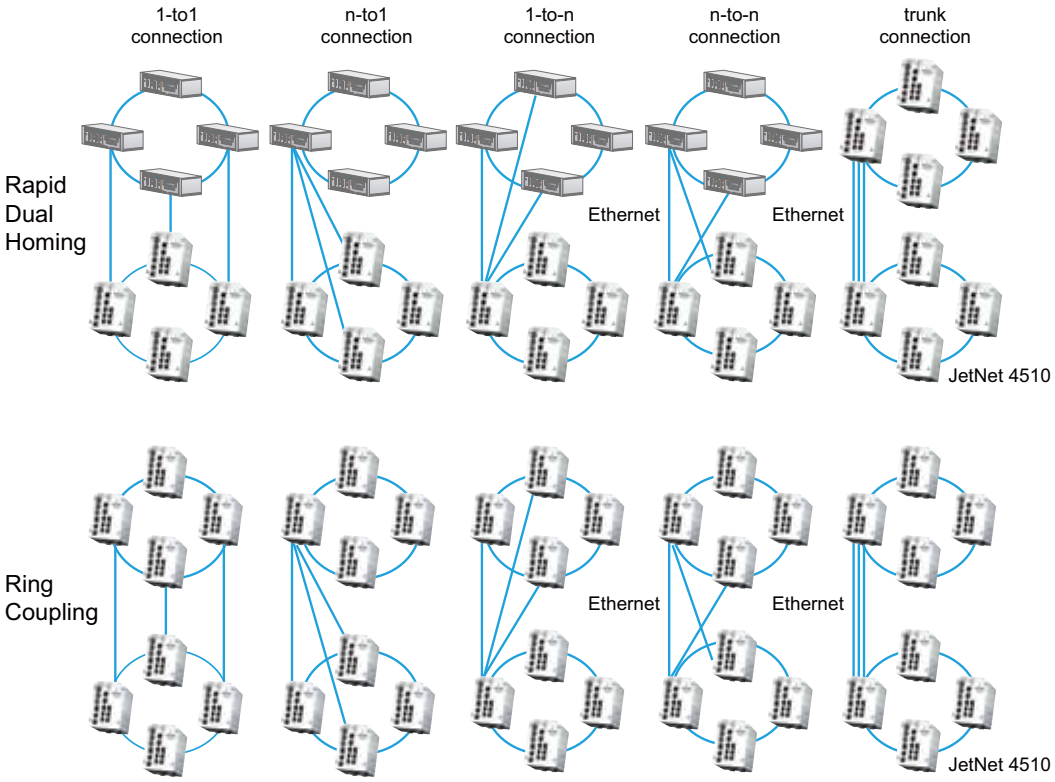
Comprehensive Redundant Solutions — Multiple Super Ring (MSR™)

The JetNet 4510 supports MSR™ (Multiple Super Ring) the next new generation of RSR (Rapid Super Ring) Ring technology. This new technologies is perfect for different network redundancy applications and structures. With the MSR™ technology, a node can be configured to multiple rings with the failover time in as little as 5ms and ZERO-second restore time. In addition, users can extend the ring topology by adding hundreds of JetNet 4510 to meet the network needs without compromising the speed of the network.

The MSR™ also facilitates the JetNet 4510 to connect with core management switch via standard Rapid Spanning Tree Protocol or through multiple paths or nodes to increase the reliability by Rapid Dual Homing (RDH™) Technology. By integrating MSR™ and Link Aggregation Control Protocol (LACP) the JetNet 4510 can enhance the link availability and to increase the link capacity. Two or more Fast Ethernet connection are bundled in order to increase the bandwidth and to create resilient and redundant links.

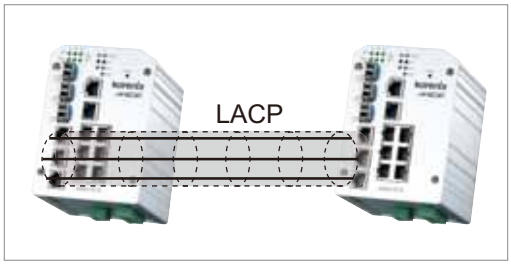
Rapid Dual Homing (RDH™) Technology

Rapid Dual Homing (RDH™) replaces DualHoming II and can be used for ring coupling. While keeping easy configuration and multiple redundancies, the failover time is much faster (less than 50 ms) and the restore time is ZERO (seamless restoration). Uplinks can be auto detected and gathered into groups. In each group, uplinks are sorted into Primary, Secondary, and Standbys by their link speed. The uplink with the highest speed is more likely to be the active path for data transmission. Link aggregation is also integrated into RDH™. An uplink can be a link or several links aggregated as a trunk, which provides better redundancy and link capacity.



Link Aggregation Control Protocol

Link Aggregation Control Protocol (LACP) allows you to group multiple Ethernet ports in parallel to increase the link bandwidth. The aggregated ports can be considered one physical port, so that the bandwidth is higher than just one single Ethernet port. The member ports of the same trunk group can balance the loading and backup with each other. The LACP feature is usually used when you need higher bandwidth for the backbone network. This is an inexpensive way for users to transfer much more data. If the trunk port is also assigned as a ring port, it will become a TrunkRing™, which means that the bandwidth of ring path has increased with port trunk technology. Now, there is no recovery time when failures occur. The JetNet 4510 provides a simple and easy way to aggregate port bandwidth into Rapid Super Ring.

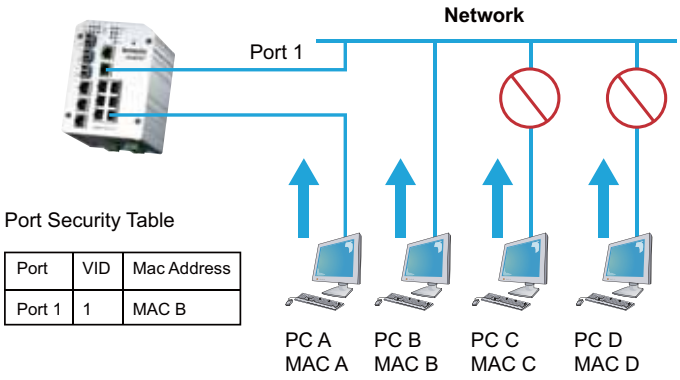


Various Network Control and Security Features

The JetNet 4510 provides various network control and security features. The Network Control feature allows users to optimize their industrial environment. The supported features include VLAN, IGMP Snooping, Quality of Service(QoS), Link Aggregation Control Protocol (LACP), Rate Control. The security can help users avoid hackers' attack. The features include DHCP Server, IP and MAC Binding, 802.1x Access Control, SSH, IP Access Table and Port Security.

Port Security

Port Security is an enhanced security feature provided by JetNet 4510. Port Security is also known as, "Port and MAC Binding". The users can bind a specific MAC address to a specific port, add the MAC and Port binding entry/entries to the port security table. After enabling this, only the PC with the available MAC address can access the network through the switch. The other PCs can't even pass the traffic through the port.

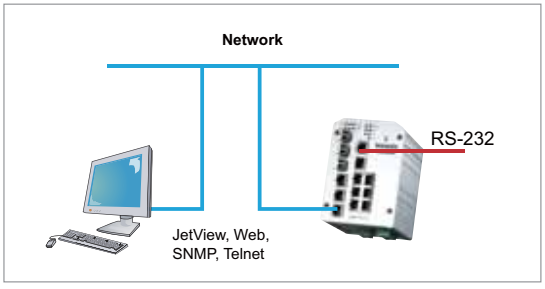


Port Security Table

Port	VID	Mac Address
Port 1	1	MAC B

Easy-to-Configure Network Management Features

The JetNet 4510 also provides users many advanced management features. It can be configured smartly by JetView, Web browser, SNMP, Telnet and RS-232 console Command Line Interface (CLI).
It provides Failure notification by E-mail, SNMP Trap, System Log, Digital Input and Fault Relay. The JetNet 4510 also supports Built-In Watchdog Timer for system recovering when detecting CPU failure.



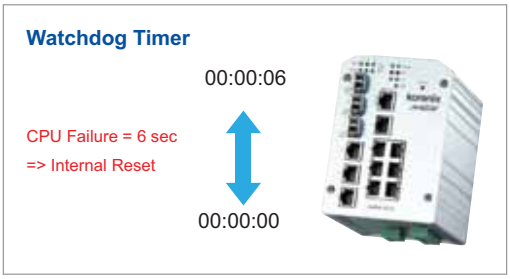
JetView, Easy Management Utility

The JetView is the convenient tool to help administrators to discover the JetNet series Switches. It supports group IP assignment,group firmware upgrade, group configuration backup and restore.



A Built-in Watchdog Timer

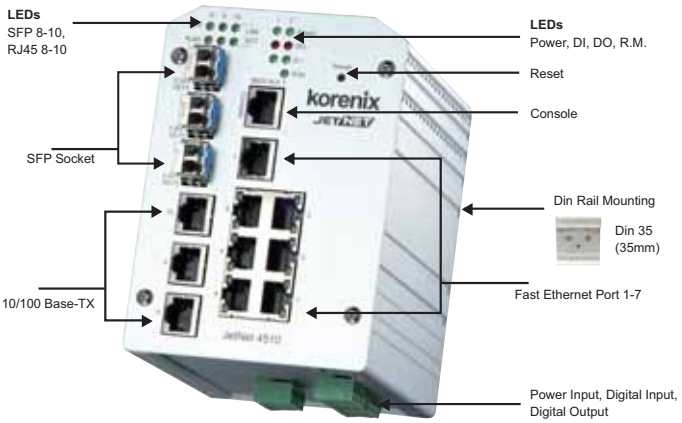
With a built-in Watchdog timer, the JetNet 4510 performs a warm boot (restarting the switch) automatically when the switch system locks up. It saves the effort of maintenance for keeping network alive if the switch can recover by itself.



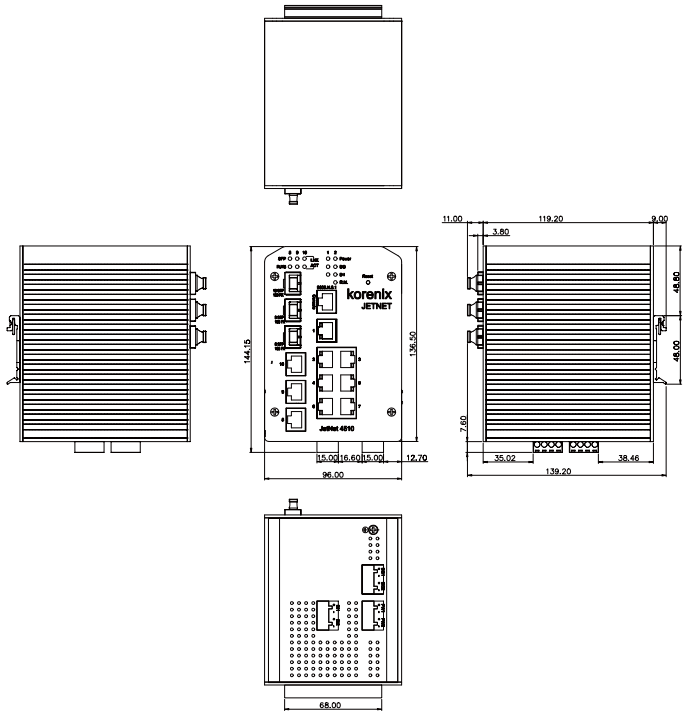
Brilliant Idea for Hazardous Environment Application Robust Mechanism Design

Korenix JetNet 4510 has an outstanding outlook plus is rock solid with strong functionality. Using an aluminum extrusion case with industrial quality, IP 31 class of protection, light weight, rigid shell and excellent thermal conductivity units can operate under harsh industrial environment reliably.

JetNet 4510 Appearance



Dimensions (Unit –mm)



Specification

Technology

Standard:
IEEE 802.3 10Base-T Ethernet
IEEE 802.3u 100Base-TX Fast Ethernet
IEEE 802.3u 100Base-FX Fast Ethernet
IEEE 802.3x Flow Control and Back-pressure
IEEE 802.1p class of service
IEEE 802.1Q VLAN and GVRP
IEEE 802.1D-2004 Rapid Spanning Tree Protocol (RSTP)
IEEE802.3ad LACP
IEEE802.1X Port_based Network Access Control

Performance

Switch Technology:
Store and Forward Technology with 32Gbps Switch Fabric
System Throughput: 2.976Mpps/ 64bytes packet
Transfer packet size: 64 bytes to 1522 bytes (with VLAN Tag)
MAC Address: 8K MAC
Packet Buffer: 1Mbits
Relay Alarm: Dry Relay output with 1A@24V ability

Management

Configuration: Cisco-Like CLI, JetView, Web, HTTPS, SSH; TFTP/Web Update for firmware and configuration backup/restore, DHCP Client, Warm reboot, Reset to default, Admin password, Port Speed/Duplex control, status, statistic, MAC address table display, Static MAC, Aging time, SNMP v1, v2c, v3, Traps and RMON1
SNMP MIB: MIB-II, Bridge MIB, VLAN MIB, SNMP MIB, RMON and Private MIB
Port Trunk: Up to 5 Static Trunk and 802.3ad LACP
VLAN: IEEE802.1Q VLAN, GVRP. Up to 64 VLAN groups
Quality of Service: Four priority queues per port, IEEE802.1p COS and Layer 3 TOS/DiffServ
IGMP Snooping: IGMP Snooping V1/V2/V3 for multicast filtering and IGMP Query V1/V2
Rate Control: Ingress filtering for Broadcast, Multicast, Unknown DA or All packets, and Egress filtering for All packets
NTP: Network Time Protocol to synchronize time from internet or local PC
Embedded Watchdog: Embedded hardware watchdog timer to auto reset system when switch system failure
Port Mirroring: Online traffic monitoring on multiple selected ports
Port Security: Assign authorized MAC to specific port
IP Security: IP security to prevent unauthorized access
802.1x: Port_based Network Access Control
DHCP Server: Up to 255 IP address, support IP and MAC binding
E-mail Warning: Automatic warning by pre-defined events
System Log: Supports both Local mode and Server mode

Network Redundancy

Network Redundancy: Rapid Spanning Tree Protocol: IEEE802.1D-2004 Rapid Spanning Tree Protocol. Compatible with Legacy STP and IEEE802.1w
Multiple Super Ring(MSR™): 2nd generation Korenix Ring Redundancy Technology. Failure recovery within 5ms.
Rapid Dual Homing (RDH™): Support multiple node to node, multiple path to one node to obtain more flexible and reliable architecture
TrunkRing™: Provides port aggregate function in ring path to get more bandwidth for higher throughput ring architecture
Multiple Ring: New generation of ring coupling technology without extra control port - TangentRing
Legacy Super Ring: Backward compatible in client mode

Interface

Number of Ports: 10/100TX: 7 x RJ-45, Auto MDI/MDI-X, Auto Negotiation
10/100TX: 3 x RJ-45, combo with SFP
100Base-FX: 3 x SFP with Hot Swappable
Cables:
10Base-T: 2-pair UTP/STP Cat. 3, 4, 5 cable (100m)
100 Base-TX: 2/4-pair UTP/STP Cat. 5 cable (100m)
Diagnostic LED:
10/100 RJ-45: Link/Activity(Green), Full duplex/Collision (Yellow)
SFP: Link/Activity(Green)
Unit: Power(Green), Digital Out(Red), Digital Input(Green), R.M.(Green)
RS232 Console: RJ-45 Connector, Pin3: TxD, Pin6: RxD, Pin5:GND
Power: 2 sets of power Inputs
Digital Input: 2 sets of Digital Input
Logic Low (0): 0-10VDC/Logic High(1): 11-30VDC
Alarm: 2 sets of Relay outputs for pre-defined events
Reset: Reset button is provided to restore default settings

Power Requirements

System Power: 12~48V/-12~-48VDC with Reverse Polarity Protection
Power Consumption: 11.5 Watts @ DC 48V

Mechanical

Installation: DIN-Rail mount or Wall Mount
Case: IP-31 protection, aluminum metal case
Dimension: 137mm(H) x 96mm (W) x 119mm (D) (without DIN rail clip)
Weight: 0.915kg with package

Environmental

Operating Temperature:-20 ~70°C
Operating Humidity: 5% ~ 95% (non-condensing)
Storage Temperature: -40 ~ 85°C (-40 ~ 185°F)
Hi-Pot: 1.2KV for ports and power

Regulatory Approvals

EMI: FCC Class A, CE/EN55022. Class A
EMS: EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11
Safety: UL/cUL 60950
Shock: IEC60068-2-27
Vibration: IEC60068-2-6
Free Fall: IEC60068-2-32
MTBF: 249,683 Hours, MIL-HDBK-217F GB GB(MILITARY HANDBOOK)standard
Warranty: 5 years

Ordering Information

JetNet 4510 Industrial 10-Port Managed Fast Ethernet Switch

Includes:

- JetNet 4510(without SFP transceiver)
- Wall mounting plate
- Quick Installation Guide
- Documentation CD-ROM
- Console cable

Optional Accessories

100Base-FX Multi-Mode SFP Transceiver

100Base-FX Single-Mode SFP Transceiver

100Base-FX BIDI/WDM Single-Mode SFP Transceiver

JetNet 4508

Industrial 8-port Managed Fast Ethernet Switch



- 8-port 10/100 TX managed fast Ethernet switch
- 3.2Gbps Switch Fabric with excellent data exchange performance
- Super Ring technology, back up system recovery time less than 20ms and up to 250 sets, Dual Homing and Couple Ring
- SNMP v1/v2c, IGMP snooping v1/v2, RMON, VLAN, QoS, Rate control for network management
- Support 1.2KV Hi-Pot isolation protection
- Redundant power input DC 12~48V
- Fault relay alarm
- Aluminum case with IP-31 grade protection
- -20~70°C operating temperature for hazardous environment application

Industrial PoE Switch
IP67/68 Ethernet Switch
Rackmount Managed Switch
Gigabit Switch
Redundant Switch
Entry-Level Switch
Networking Computer
Communication Computer
Ethernet I/O Server
Serial Device Server
Media Converter
Multiport Serial Card
SFP Module
Din Rail Power Supply

Overview

JetNet 4508 is an 8 port 10/100TX Industrial Managed Fast Ethernet Switch with SNMP, Web management interface and innovative software features for various networking applications. The SNMP functionality is compatible with OPC server (Kepware) providing the most popular management functions in automation. Using standard SNMP tools it also has remote management ability.

One of the main challenges in industrial automation applications is to ensure permanent uptime in the system. For this requirement, JetNet 4508 provides the Super Ring mechanism which has 20ms recovery time - faster than RSTP. The JetNet 4508 can merge RSTP and Super Ring functionality with core switches through the Dual Homing function to deliver a more reliable networking architecture for system redundancy.

JetNet 4508 has a built in relay output for alarms on port and power outage events. The relay output function will form a short circuit to trigger external one to inform your I.T. engineer when a power or port link down event has occurred. The port link down alarm is enabled by DIP-switch.

For operation in harsh environments, the JetNet 4508 is equipped with dual power input with redundancy and rigid aluminum case with excellent heat radiation allowing a -20~70°C operating temperature.

Full Network Management & Enhanced Super Ring Compatibility

Versatile and User-friendly configuration interface, including SNMP, VLAN, QoS, IGMP, event warning, not only to make your job easier, but also saves your time and money.

Recovery time<20 ms gives you fault-tolerant connection. JetNet 4508 series also supports Dual Homing and Ring Coupling, featuring the strong ring redundancy.

High-Speed Transmission & True Reliability

Excellent data transmission performance is provided for you. No traffic will be delayed with the transmission rate up to 3.2Gbps.
With the 1.2KV Hi-Pot isolation protection, CE/FCC regulatory approvals, and 5-year global warranty, JetNet 4508 series are your reliable choice for hazardous applications.

Redundant Power Inputs & Easy Installation

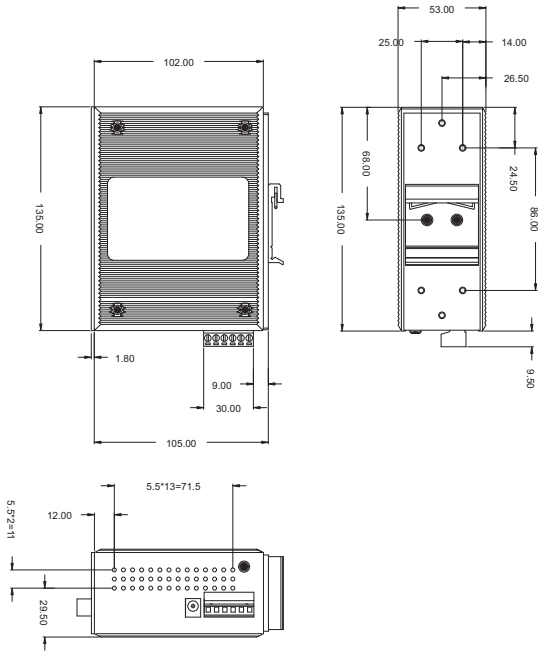
Operating voltage is 12V~48V, the unit can also be cabled with a twin DC24V input. Dual power input and built-in reverse power polarity protection are designed as the redundant power system to ensure your power continuity.
JetNet 4508 series can be easily wall mounted or mounted directly on DIN rail.

Brilliant Idea for Hazardous Environment Application

The IP31 rigid aluminum flat casing and wide operation temperature range ensure reliable operation in harsh environment.

Extended operating temperature range is available for project-based request.

Dimensions (Unit –mm)



Specification

Technology

Standard: IEEE802.3 10Base-T
IEEE802.3u 100Base-TX
IEEE802.3x flow control
IEEE802.1D Spanning Tree
IEEE802.1w Rapid Spanning Tree (RSTP)
IEEE 802.1Q VLAN
IEEE802.1p Class of Service

Performance

Switch Technology:
Store and Forward Technology with 32Gbps Switch Fabric.
System Throughput: 14,880pps for Ethernet and 148,800 for Fast Ethernet
Transfer packet size: 64 to 1522Bytes.
MAC Address: 2K MAC
Packet Buffer: 1Mbits

Management

Configuration: SNMP v1, v2c and Web browser. TFTP update, configuration backup/restore, DHCP client, warm reboot, reset to default, Admin password, Port Speed/ Duplex control, status and statistics, SNMP trap, RMON
SNMP MIB: MIB-II, Bridge MIB, RMON, VLAN MIB, Ethernet like MIB, Korenix Private MIB.
SNMP Trap: Support 3 trap stations.
VLAN: Port Based VLAN, Tag VLAN. VLAN ID 1 to 4094. 64 VLAN groups in maximum, Management VLAN
Quality of Service: Meets IEEE802.1p class of service, per port 4 priority queues, Layer 3 IPv4 TOS/DiffServ
Rate Control: Support ingress and egress packet filtering by different types of packet format combination.
Packet filter: 4 types of packet filter rule, All packets, Broadcast/ multicast/ unknown unicast packet, broadcast/ multicast packet or broadcast packet only
IGMP Snooping: Compliance with IGMP v1/v2 and IGMP Query mode. Maximum IGMP groups up to 256
Timer: Support Simple Network Time Protocol (SNTP) to synchronize time from internet.
Firmware upgrade: TFTP firmware upgrade.
Port Mirror: TX/RX only, both of TX and RX packets
System Log: Provides 1000 entries for system or remote log server
E-mail Warning: SMTP warning by pre-defined events

Network Redundancy

Super Ring: Recovery time less than 20ms and compatible with JetNet 3500, JetNet 4000 and JetNet 5010G
Coupling Ring: Provides the ability to couple 2 super rings.
Dual Homing: Provides the ability to link Super ring and RSTP with higher level switch
Rpaid Spanning Tree: IEEE802.1D Spanning Tree and IEEE802.1w Rapid Spanning Tree

Interface

Number of Ports: 8 x 10/100Base-TX with Auto MDI/ MDI-X, Auto-Negotiation functions.
Connectors: 10/100TX: 8 x RJ-45
Terminal Block: 6-pin for 2 x power input and 1 relay alarm output
DC power Jack x 1
Cables: CAT-3, CAT-4, CAT-5 unshielded twisted pair or shielded twisted pair cable. The Link distance is 100 meters in maximum
Diagnostic LED:
Per system: Power (green) x 3, Ring Master (green) x 1, Alarm (red) x 1
Per RJ-45 port: Link (green on)/Activity(green blinking), Full duplex (Yellow on)/Collision (Yellow blinking)
DIP Switch: 1 x 9-pin DIP Switch
DIP switch #1 ~#8:Port Link Down Alarm Enable (On)/ Disable(Off)
DIP switch #9:Ring Master Enable(On)/Disable(Off)
Relay Alarm: Dry Relay output with 1A@24V ability

Power Requirements

System Power: 2 power input by terminal block
Input Voltage: DC 24V (12~48V) with Reverse Polarity Protection
Power Consumption: 5.04 Watts @ DC 24V

Mechanical

Installation: DIN-Rail mount or Wall Mount
Case: IP-31 grade aluminum metal case
Dimension:
135mm(H) x 53mm (W) x 105mm (D) (without DIN rail clip)
Weight:
1.106g with package
0.731g without package

Environmental

Operating Temperature:-20 ~70°C
Operating Humidity: 5% ~ 95%, (non-condensing)
Storage Temperature: -40 ~ 85°C
Hi-Pot: 1.2KV for all ports and power

Regulatory Approvals

EMI: FCC Class A, CE/EN55022.
EMS:
EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11
Safety: CE/EN60950
Shock: IEC60068-2-27
Vibration: IEC60068-2-6
Free Fall: IEC60068-2-32
MTBF: 319,175 Hours, MIL-HDBK-217F GB standard
Warranty: 5 years

Ordering Information

JetNet 4508 Industrial 8-port Managed Fast Ethernet Switch

Includes:

- JetNet 4508
- Wall mount panel/Quick Installation Guide/CD User manual

JetNet 4508f

Industrial 8-port Managed Fast Ethernet Fiber Switch



- 6-port 10/100 TX and 2 100Base-FX fiber ports, single-mode Fiber up to 30KM
- 3.2Gbps Switch Fabric with excellent data exchange performance
- Super Ring technology, back up system recovery time less than 20ms and up to 250 sets, Dual Homing and Couple Ring
- SNMP v1/v2c, IGMP snooping v1/v2, RMON, VLAN, QoS, Rate control for network management
- Support 1.2KV Hi-Pot isolation protection
- Redundant power input DC 12~48V
- Fault relay alarm
- Aluminum case with IP-31 grade protection
- -10~70°C operating temperature for hazardous environment application

Overview

JetNet 4508f is a 6 port 10/100TX plus 2 port 100Base-FX fiber Industrial Managed Fast Ethernet Switch with SNMP, Web management interface and innovative software features for various networking applications. The SNMP functionality is compatible with OPC server (Kepware) providing the most popular management functions in automation. Using standard SNMP tools it also has remote management ability.

One of the main challenges in industrial automation applications is to ensure permanent uptime in the system. For this requirement, JetNet 4508f provides the Super Ring mechanism which has 20ms recovery time - faster than RSTP.

The JetNet 4508f can merge RSTP and Super Ring functionality with core switches through the Dual Homing function to deliver a more reliable networking architecture for system redundancy.

JetNet 4508f has a built in relay output for alarms on port and power outage events. The relay output function will form a short circuit to trigger external one to inform your I.T. engineer when a power or port link down event has occurred. The port link down alarm is enabled by DIP-switch.

For operation in harsh environments, the JetNet 4508f is equipped with dual power input with redundancy and rigid aluminum case with excellent heat radiation allowing a -10~70°C operating temperature.

Full Network Management & Enhanced Super Ring Compatibility

Versatile and User-friendly configuration interface, including SNMP, VLAN, QoS, IGMP, event warning, not only to makes your job easier, but also saves your time and money.

Super Ring is Korenix Ring redundancy technology. The recovery time is <20 ms, the 1st Ring Port of the R.M. is the primary path. The 2nd Ring Port of the R.M. is the block path. Once the primary path fails, the 2nd path will be recovered within 20ms which gives you a fault-tolerant connection. JetNet 4508 series also support Dual Homing and Ring Coupling, featuring the strong ring redundancy.

Fiber Optic Port Options & High-Speed Transmission

Single-mode and Multi-mode fiber optic ports meet your needs for long distance transmission up to 30KM.

Excellent data transmission performance is provided for you. No works will be delayed with the transmission rate up to 3.2Gbps.

Redundant Power Inputs & Easy Installation

Operating voltage is 12V~48V, the unit can also be cabled with a twin DC24V input. Dual power input and built-in reverse power polarity protection are designed as the redundant power system to ensure your power continuity.

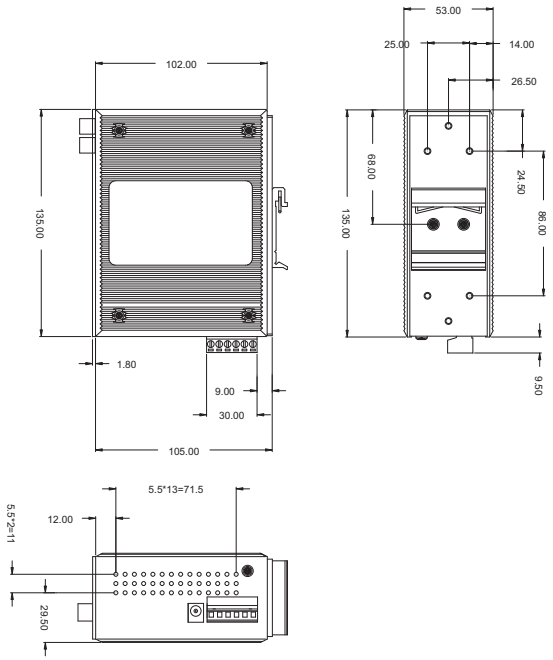
JetNet 4508f series can be easily wall mounted or mounted directly on DIN rail.

Hazardous Environment Application & True Reliability

The IP-31 rigid aluminum flat casing and wide operation temperature range ensure reliable operation for harsh environment. Extended operating temperature range is available for project-based request.

With the 1.2KV Hi-Pot isolation protection, CE/FCC regulatory approvals, and 5-year global warranty, JetNet 4508f series are your reliable choice for hazardous applications.

Dimensions (Unit –mm)



Specification

Technology

Standard: IEEE802.3 10Base-T
IEEE802.3u 100Base-TX/100Base-FX
IEEE802.3x flow control and Back-pressure
IEEE802.1d Spanning Tree
IEEE802.1w Rapid Spanning Tree (RSTP)
IEEE 802.1Q VLAN
IEEE802.1p Class of Service

Performance

Switch Technology:
Store and Forward Technology with 3.2Gbps Switch Fabric.
System Throughput: 1.49Mpps
MAC Address: 2K MAC with Auto learning and refresh function
Packet Buffer: 1Mbits
Transfer performance: 14,880pps for Ethernet and 148,800pps for Fast Ethernet and transfer packet size from 64 to 1522Bytes

Management

Configuration: SNMP v1, v2c and Web browser. TFTP update, configuration backup/restore, DHCP client, warm reboot, reset to default, Admin password, Port Speed/ Duplex control, status and statistics, SNMP trap, RMON
SNMP MIB: MIB-II, Bridge MIB, RMON, VLAN MIB, Ethernet like MIB, Korenix Private MIB.
SNMP Trap: Support 3 trap stations.
VLAN: Port Based VLAN, Tag VLAN. VLAN ID 1 to 4094. 64 VLAN groups in maximum, Management VLAN
Quality of Service: Meets IEEE802.1p class of service, per port 4 priority queues, Layer 3 IPv4 TOS/DiffServ
Rate Control: Support ingress and egress packet filtering by different types of packet format combination.
Packet filter: 4 types of packet filter rule, All packets, Broadcast/ multicast/ unknown unicast packet, broadcast/ multicast packet or broadcast packet only
IGMP Snooping: Compliance with IGMP v1/v2 and IGMP Query mode. Maximum IGMP groups up to 256
Timer: Support Simple Network Time Protocol (SNTP) to synchronize time from internet.
Firmware upgrade: TFTP firmware upgrade.
Port Mirror: TX/RX only, both of TX and RX packets
System Log: Provides 1000 entries for system or remote log server
E-mail Warning: SMTP warning by pre-defined events

Network Redundancy

Super Ring: The Super Ring function supports netwrok recovery time less than 20ms with 250 entities, and also compatible with JetNet 3500, JetNet 4000 and JetNet 5010G
Coupling Ring: Provides the ability to couple 2 super rings
Dual Homing: Provides the ability to link Super ring and RSTP with higher level switch
Spanning Tree: IEEE802.1D Spanning Tree
IEEE802.1w Rapid Spanning Tree

Interface

Number of Ports: 6 x 10/100Base-TX with Auto MDI/ MDI-X, Auto-Negotiation functions. 2 x 100Base-FX
Connectors:
10/100TX: 6 x RJ-45
100Base-FX: 2 x SC connectors for Multi-mode or single mode fiber
Terminal Block: 6-pin for 2 x power input and 1 relay alarm output
DC power Jack x 1
Cables: CAT-3, CAT-4, CAT-5 unshielded twisted pair or shielded twisted pair cable. The Link distance is 100 meters in maximum
Fiber Cable:
50/125um or 62.5/125 multi-mode fiber, 2KM (JetNet 4508f-m)
8/125um or 9/125um single mode fiber, 30KM (JetNet 4508f-s)
Fiber Transceiver:
JetNet 4508f-m
Wave-length:1310nm
Tx Power:-19~-14dBm(Min.)
Rx Sensitivity:-31~-14dBm(Max.)
Link Budget:12dBm
JetNet 4508f-s
Wave-length:1310nm
Tx Power:-15~-8dBm(Min.)
Rx Sensitivity:-34~-8dBm(Max.)
Link Budget:19dBm
Diagnostic LED:
Per system: Power (green) x 3, Ring Master (green) x 1, Alarm (red) x 1
Per RJ-45 port: Link (green on)/Activity(green blinking), Full duplex (Yellow on)/Collision (Yellow blinking)
DIP Switch: 1 x 9-pin DIP Switch
DIP switch #1 ~#8:Port Link Down Alarm Enable (On)/ Disable(Off)
DIP switch #9:Ring Master Enable(On)/Disable(Off)
Relay Alarm: Dry Relay output with 1A@24V ability. The relay can be enable/disable by software configuration

Power Requirements

System Power: 2 power input by terminal block
Input Voltage: DC 24V (12~48V) with Reverse Polarity Protection
Power Consumption: JetNet 4508f: 7.68 Watts @ DC 24V

Mechanical

Installation: DIN-Rail mount or Wall Mount
Case: IP-31 grade aluminum metal case
Dimension: 135mm(H) x 53mm (W) x 105mm (D) (without DIN rail clip)
Weight: 1.11kg with package
0.735kg without package

Environmental

Operating Temperature:-10 ~70℃
Operating Humidity: 5% ~ 95%, (non-condensing)
Storage Temperature: -40 ~ 85℃
Hi-Pot: 1.2KV for all ports and power

Regulatory Approvals

EMI: FCC Class A, CE/EN55022.
EMS:EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11
Safety: CE/EN60950, UL/cUL60950
Shock: IEC60068-2-27
Vibration: IEC60068-2-6
Free Fall: IEC60068-2-32
MTBF: 315,109 Hours, MIL-HDBK-217F GB
Warranty: 5 years

Ordering Information

JetNet 4508f-m Industrial 8-port Managed Fast Ethernet Fiber Switch, 2 SC/Multi-mode, 2KM

Includes:

- JetNet 4508f-m
- Wall mount panel
- Quick Installation Guide
- CD User manual

JetNet 4508f-s Industrial 8-port Managed Fast Ethernet Fiber Switch, 2 SC/Single-mode, 30KM

Includes:

- JetNet 4508f-s
- Wall mount panel
- Quick Installation Guide
- CD User manual

JetNet 4010

Industrial 10-port Web-Managed Fast Ethernet Switch



CE FC cULus LISTED RoHS

- 7 10/100 Base TX and 3 RJ-45/SFP combo (10/100Base-TX, 100Base-FX)
- Multiple Super Ring (recovery time ≤5ms), Rapid Dual Homing, Multiple Ring, and RSTP
- VLAN, GVRP, QoS, IGMP Snooping V1/V2/V3, Rate Control, Port Trunking, LACP, Online Multi-Port Mirroring
- 32Gbps Non-Blocking, 8K MAC address table
- Supports console CLI , Web, HTTPS, SSH and JetView
- Advanced security feature supports IP Security, Port Security, DHCP Server, IP and MAC Binding, 802.1x network access control
- Event Notification by E-mail, Syslog, Digital Input and Relay Output
- Rigid Aluminum Case Complies with IP31, Redundant power, DIN-Rail/Wall-Mounting/Desktop Installation

Overview

JetNet 4010 is an industrial Managed Fast Ethernet Switch, designed with 7-10/100TX and 3-10/100 RJ-45 / 100FX SFP combo ports.

The flexible 3 combo ports offer flexibility for additional fiber connections by plugging different types of 100MM SFP modules, which can support 2KM in Multi-Mode or 120KM in Single-Mode. The combo ports make port combination even easier, such as 8 RJ ports and 2 fiber ports, or 9 RJ ports and 1 fiber port. The standard 10 port Fast Ethernet switch greatly reduces total cost by up to 15% for fiber uplink network.

In addition to cost savings, the flexible design of the JetNet 4010 can adapt to the world's fastest Ring Technology by Korenix. It only takes 5ms to recover from link failure, no matter how many nodes are inside a ring, and the restore time is zero when the failed link is recovered. The patented Multiple Super Ring provides the most flexible ring topologies, such as shared link of multiple rings, or shared unit of multiple rings, making it the best possible. The Multiple Super Ring is highly compatible to Rapid Spanning Tree by the new Dual Homing plus design. JetNet 4010 also enhances security designs, such as SSH, 802.1X, etc.

3 Flexible Fast Ethernet Combo Ports

The JetNet 4010 is designed with three combo Fast Ethernet ports. Each combo port combines one Small Form factor Pluggable (SFP) socket for 100Mbps multimode or single mode SFP transceiver, as well as one RJ-45 copper port in 10Mbps full duplex, 100Mbps half /full duplex link mode.

The switch will automatically detect the priority of cable connections for each combo port. Users are able to connect two 100Mbps SFP ports of JetNet 4010 as a Fast Ethernet Fiber Redundant Ring topology and the third combo port as a fiber uplink port or an applicable port.

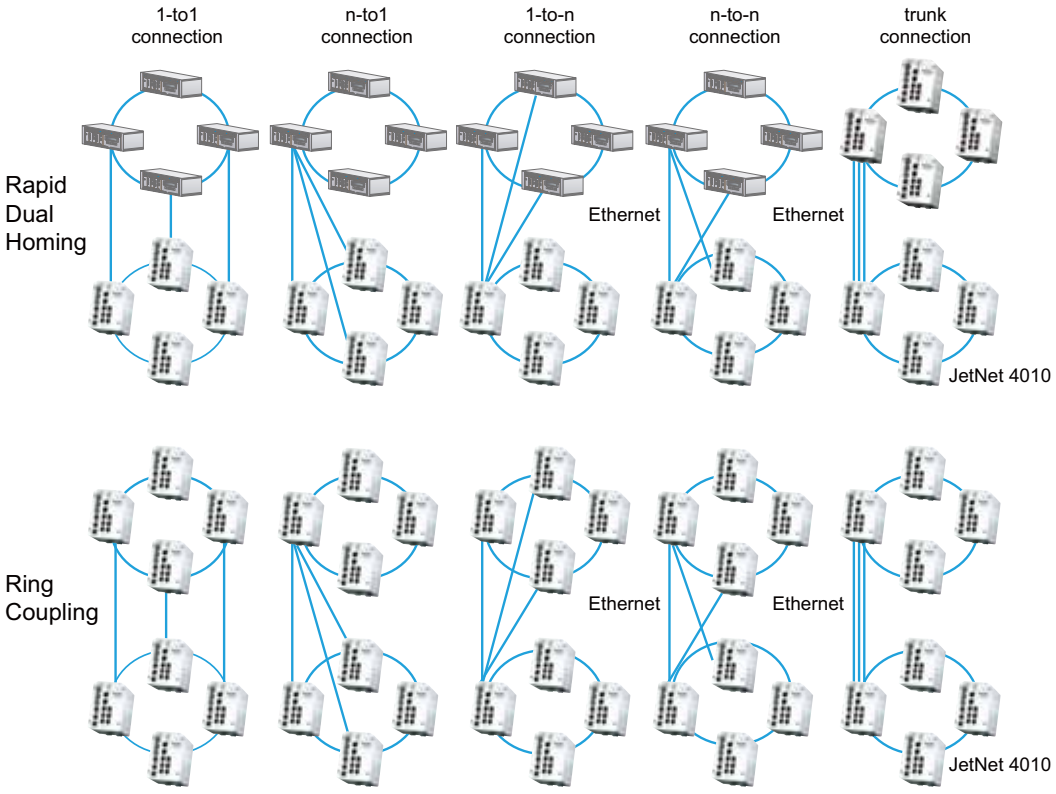
Comprehensive Redundant Solutions — Multiple Super Ring (MSR™)

The JetNet 4010 supports MSR™ (Multiple Super Ring) the next new generation of RSR (Rapid Super Ring) Ring technology. This new technologies is perfect for different network redundancy applications and structures. With the MSR™ technology, a node can be configured to multiple rings with the failover time in as little as 5ms and ZERO-second restore time. In addition, users can extend the ring topology by adding hundreds of JetNet 4010 to meet the network needs without compromising the speed of the network.

The MSR™ also facilitates the JetNet 4010 to connect with core management switch via standard Rapid Spanning Tree Protocol or through multiple paths or nodes to increase the reliability by Rapid Dual Homing (RDH™) Technology. By integrating MSR™ and Link Aggregation Control Protocol (LACP) the JetNet 4010 can enhance the link availability and to increase the link capacity. Two or more Fast Ethernet connection are bundled in order to increase the bandwidth and to create resilient and redundant links.

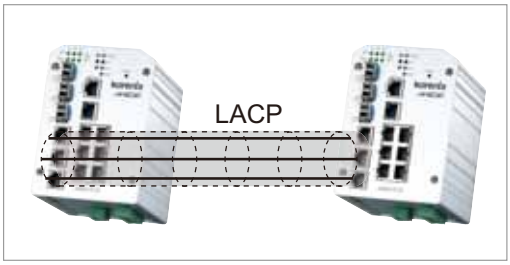
Rapid Dual Homing (RDH™) Technology

Rapid Dual Homing (RDH™) replaces DualHoming II and can be used for ring coupling. While keeping easy configuration and multiple redundancies, the failover time is much faster (less than 50 ms) and the restore time is ZERO (seamless restoration). Uplinks can be auto detected and gathered into groups. In each group, uplinks are sorted into Primary, Secondary, and Standbys by their link speed. The uplink with the highest speed is more likely to be the active path for data transmission. Link aggregation is also integrated into RDH™. An uplink can be a link or several links aggregated as a trunk, which provides better redundancy and link capacity.



Link Aggregation Control Protocol

Link Aggregation Control Protocol (LACP) allows you to group multiple Ethernet ports in parallel to increase the link bandwidth. The aggregated ports can be considered one physical port, so that the bandwidth is higher than just one single Ethernet port. The member ports of the same trunk group can balance the loading and backup with each other. The LACP feature is usually used when you need higher bandwidth for the backbone network. This is an inexpensive way for users to transfer much more data. If the trunk port is also assigned as a ring port, it will become a TrunkRing™, which means that the bandwidth of ring path has increased with port trunk technology. Now, there is no recovery time when failures occur. The JetNet 4010 provides a simple and easy way to aggregate port bandwidth into Rapid Super Ring.

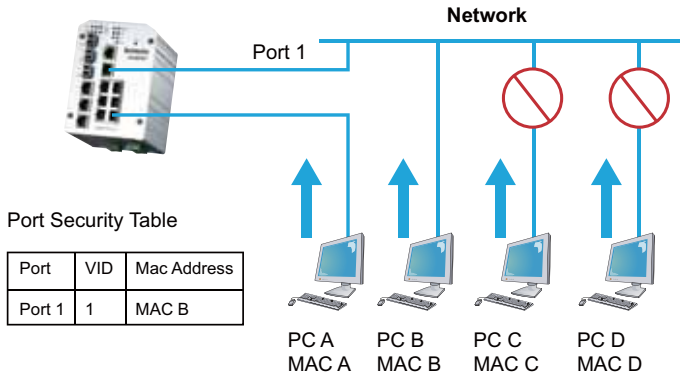


Various Network Control and Security Features

The JetNet 4010 provides various network control and security features. The Network Control feature allows users to optimize their industrial environment. The supported features include VLAN, IGMP Snooping, Quality of Service(QoS), Link Aggregation Control Protocol (LACP), Rate Control. The security can help users avoid hackers' attack. The features include DHCP Server, IP and MAC Binding, 802.1x Access Control, SSH, IP Access Table and Port Security.

Port Security

Port Security is an enhanced security feature provided by JetNet 4010. Port Security is also known as, "Port and MAC Binding". The users can bind a specific MAC address to a specific port, add the MAC and Port binding entry/entries to the port security table. After enabling this, only the PC with the available MAC address can access the network through the switch. The other PCs can't even pass the traffic through the port.



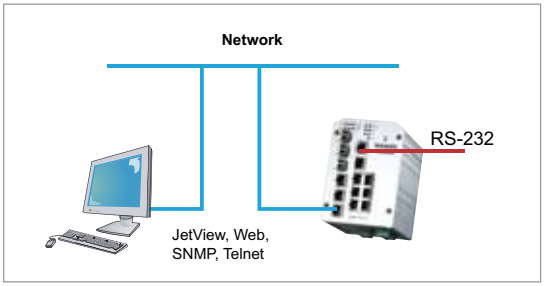
Port Security Table

Port	VID	Mac Address
Port 1	1	MAC B

Easy-to-Configure Network Management Features

The JetNet 4010 also provides users many advanced management features. It can be configured smartly by JetView, Web browser, Telnet and RS-232 console Command Line Interface (CLI).

It provides Failure notification by E-mail, System Log, Digital Input and Fault Relay. The JetNet 4010 also supports Built-in Watchdog Timer for system recovering when detecting CPU failure.



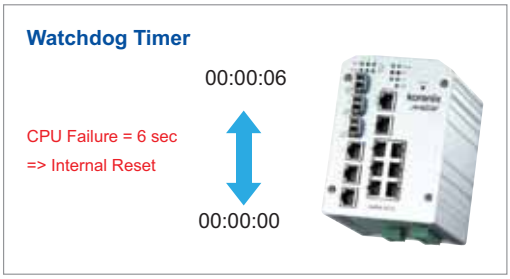
JetView, Easy Management Utility

The JetView is the convenient tool to help administrators to discover the JetNet series Switches. It supports group IP assignment,group firmware upgrade, group configuration backup and restore.



A Built-in Watchdog Timer

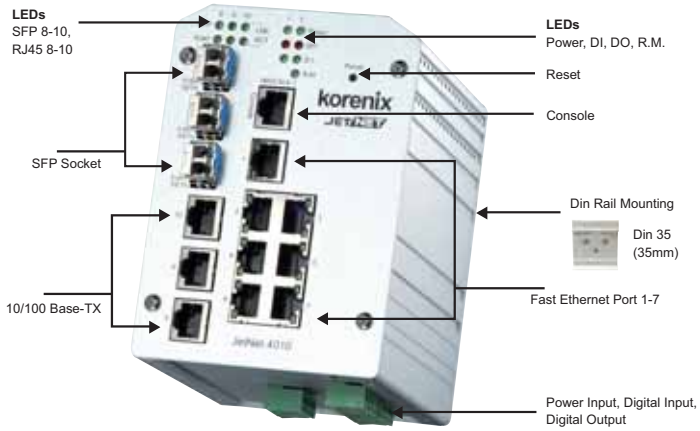
With a built-in Watchdog timer, the JetNet 4010 performs a warm boot (restarting the switch) automatically when the switch system locks up. It saves the effort of maintenance for keeping network alive if the switch can recover by itself.



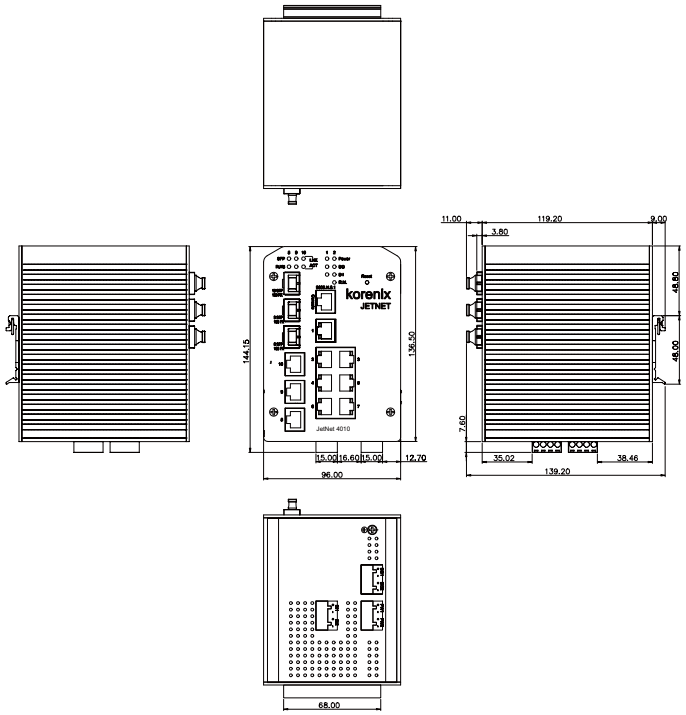
Brilliant Idea for Hazardous Environment Application Robust Mechanism Design

Korenix JetNet 4010 has an outstanding outlook plus is rock solid and fashionable with strong functionality. Using an aluminum extrusion case with industrial quality, IP 31 class of protection, light weight, rigid shell and excellent thermal conductivity units can operate under harsh industrial environment reliably.

JetNet 4010 Appearance



Dimensions (Unit –mm)



Industrial PoE Switch
IP67/68 Ethernet Switch
Rackmount Managed Switch
Gigabit Switch
Redundant Switch
Entry-Level Switch
Networking Computer
Communication Computer
Ethernet I/O Server
Serial Device Server
Media Converter
Multiport Serial Card
SFP Module
Din Rail Power Supply

Specification

Technology

Standard:
IEEE 802.3 10Base-T Ethernet
IEEE 802.3u 100Base-TX Fast Ethernet
IEEE 802.3u 100Base-FX Fast Ethernet
IEEE 802.3x Flow Control and Back-pressure
IEEE 802.1p class of service
IEEE 802.1Q VLAN and GVRP
IEEE 802.1D-2004 Rapid Spanning Tree Protocol (RSTP)
IEEE802.3ad LACP
IEEE802.1X Port_based Network Access Control

Performance

Switch Technology:
Store and Forward Technology with 32Gbps Switch Fabric
System Throughput: 2.976Mpps/ 64bytes packet
Transfer packet size: 64 bytes to 1522 bytes (with VLAN Tag)
MAC Address: 8K MAC
Packet Buffer: 1Mbits
Relay Alarm: Dry Relay output with 1A@24V ability

Management

Configuration: Cisco-Like CLI, JetView, Web, HTTPS, SSH; TFTP/Web Update for firmware and configuration backup/restore, DHCP Client, Warm reboot, Reset to default, Admin password, Port Speed/Duplex control, status, statistic, MAC address table display, Static MAC, Aging time
Port Trunk: Up to 5 Static Trunk and 802.3ad LACP
VLAN: IEEE802.1Q VLAN, GVRP. Up to 64 VLAN groups
Quality of Service: Four priority queues per port, IEEE802.1p COS and Layer 3 TOS/DiffServ
IGMP Snooping: IGMP Snooping V1/V2/V3 for multicast filtering and IGMP Query V1/V2
Rate Control: Ingress filtering for Broadcast, Multicast, Unknown DA or All packets, and Egress filtering for All packets
NTP: Network Time Protocol to synchronize time from internet or local PC
Embedded Watchdog: Embedded hardware watchdog timer to auto reset system when switch system failure
Port Mirroring: Online traffic monitoring on multiple selected ports
Port Security: Assign authorized MAC to specific port
IP Security: IP security to prevent unauthorized access
802.1x: Port_based Network Access Control
DHCP Server: Up to 255 IP address, support IP and MAC binding
E-mail Warning: Automatic warning by pre-defined events
System Log: Supports both Local mode and Server mode

Network Redundancy

Network Redundancy: Rapid Spanning Tree Protocol: IEEE802.1D-2004 Rapid Spanning Tree Protocol. Compatible with Legacy STP and IEEE802.1w
Multiple Super Ring(MSR™): 2nd generation Korenix Ring Redundancy Technology. Failure recovery within 5ms
Rapid Dual Homing (RDH™): Support multiple node to node, multiple path to one node to obtain more flexible and reliable architecture
TrunkRing™: Provides port aggregate function in ring path to get more bandwidth for higher throughput ring architecture
Multiple Ring: New generation of ring coupling technology without extra control port - TangentRing
Legacy Super Ring: Backward compatible in client mode

Interface

Number of Ports: 10/100TX: 7 x RJ-45, Auto MDI/MDI-X, Auto Negotiation
10/100TX: 3 x RJ-45, combo with SFP
100Base-FX: 3 x SFP with Hot Swappable
Cables:
10Base-T: 2-pair UTP/STP Cat. 3, 4, 5 cable (100m)
100 Base-TX: 2/4-pair UTP/STP Cat. 5 cable (100m)
Diagnostic LED:
10/100 RJ-45: Link/Activity(Green), Full duplex/Collision (Yellow)
SFP: Link/Activity(Green)
Unit: Power(Green), Digital Out(Red), Digital Input(Green), R.M.(Green)
RS232 Console: RJ-45 Connector, Pin3: TxD, Pin6: RxD, Pin5:GND
Power: 2 sets of power Inputs
Digital Input: 2 sets of Digital Input
Logic Low (0): 0-10VDC/Logic High(1): 11-30VDC
Alarm: 2 sets of Relay outputs for pre-defined events
Reset: Reset button is provided to restore default settings

Power Requirements

System Power: 12~48V/-12~-48VDC with Reverse Polarity Protection
Power Consumption: 11.5 Watts @ DC 48V

Mechanical

Installation: DIN-Rail mount or Wall Mount
Case: IP-31 protection, aluminum metal case
Dimension: 137mm(H) x 96mm (W) x 119mm (D)
(without DIN rail clip)
Weight: 0.915kg with package

Environmental

Operating Temperature:-20 ~70°C
Operating Humidity: 5% ~ 95% (non-condensing)
Storage Temperature: -40 ~ 85°C (-40 ~ 185°F)
Hi-Pot: 1.2KV for ports and power

Regulatory Approvals

EMI: FCC Class A, CE/EN55022. Class A
EMS: EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11
Safety: UL/cUL 60950
Shock: IEC60068-2-27
Vibration: IEC60068-2-6
Free Fall: IEC60068-2-32
MTBF: 249,683 Hours, MIL-HDBK-217F GB GB(MILITARY HANDBOOK)standard
Warranty: 5 years

Ordering Information

JetNet 4010 Industrial 10-Port Web-Managed Fast Ethernet Switch

Includes:

- JetNet 4010(without SFP transceiver)
- Wall mounting plate
- Quick Installation Guide
- Documentation CD-ROM
- Console cable

Optional Accessories

100Base-FX Multi-Mode SFP Transceiver

100Base-FX Single-Mode SFP Transceiver

100Base-FX BIDI/WDM Single-Mode SFP Transceiver

JetNet 4005 / 4008

Industrial 5 / 8-port Web-Managed Fast Ethernet Switch



- 5/8-port 10/100 TX Web-Managed Fast Ethernet Switch
- 3.2Gbps Switch Fabric with excellent data exchange performance
- Super Ring technology, back up system recovery time less than 20ms
- IGMP snooping v1/v2, VLAN, QoS, Rate control for network management
- Web-based configuration
- Support 1.2KV Hi-Pot isolation protection
- Redundant power input DC 12~48V
- Fault relay alarm
- Aluminum case with IP-31 grade protection
- DIN-Rail/Wall-Mounting/Desktop Installation
- -20~70°C operating temperature for hazardous environment application

Overview

The JetNet 4005/4008 are 5/8-port 10/100TX Industrial Web-Managed Fast Ethernet Rail Switch with excellent software features including port control, port status, VLAN, Port Mirror, IGMP snooping with query, Quality of Service, Simple Network Time Protocol (SNTP), DHCP Client, STP/RSTP and Super Ring.

One of the main challenges in industrial automation applications is to ensure permanent uptime in the system. To meet this requirement, JetNet 4005/4008 provides Super Ring mechanism which has 20ms recovery time - faster than RSTP. JetNet 4005/4008 has a built-in relay output for port and power outage alarms. The fault relay alarm will inform you whenever there is any port link down. Just move up the DIP switch and the fault relay alarm will be functioning!

To be operated in a harsh operating environment, JetNet 4005/4008 are equipped with dual power inputs with redundancy and rigid aluminum case with excellent heat radiation for -20~70°C environment operating temperature.

Web Management for Easy Configuration & Non-stop Super Ring

Through the versatile and User-friendly interface configuration of VLAN, QoS, IGMP and event warning are not only to made easy, but also save your time and money.

Super Ring is Korenix Ring redundancy technology.

The recovery time is <20 ms, the 1st Ring Port of the R.M. is the primary path. The 2nd Ring Port of the R.M. is the block path. Once the primary path is failed, the 2nd path will be recovered within 20ms which gives you fault-tolerant connection.

High-Speed Transmission & Fault Relay Output

Excellent data transmission performance is provided for you. No traffic will be delayed with the transmission rate up to 3.2Gbps.
One relay output is an important feature to let you know when there is any event of port link down. Just move up the DIP switch, the fault relay alarm will be functioning!

Redundant Power Inputs & Easy Installation

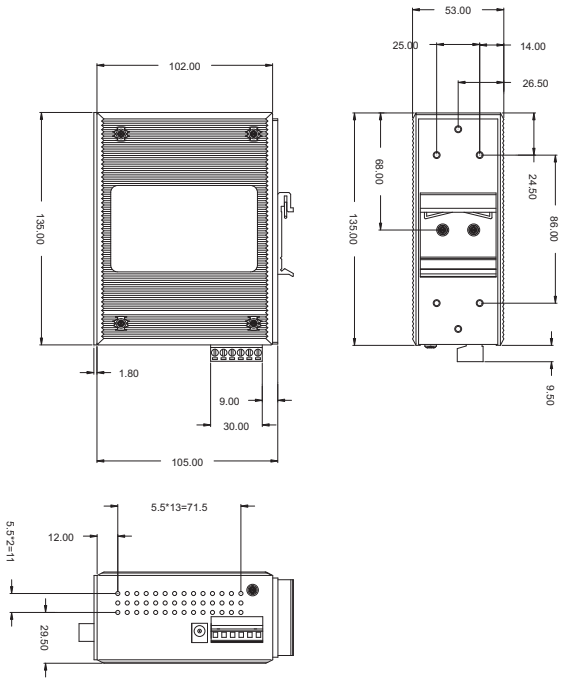
Operating voltage is 12V~48V, the unit can also be cabled with a twin DC24V input. Dual power input and built-in reverse power polarity protection are designed as the redundant power system to ensure your power continuity.
JetNet JetNet 4005/4008 series can be easily wall mounted or mounted directly on DIN rail.

Hazardous Environment Application & True Reliability

The IP31 rigid aluminum flat casing and wide operating temperature ensures reliable operation in harsh environments. Extended operating temperature range is available for project-based request.

With the 1.2KV Hi-Pot isolation protection, CE/FCC regulatory approvals, and 5-year global warranty, JetNet 4005/4008 series are your reliable choice for hazardous applications.

Dimensions (Unit –mm)



Specification

Technology

Standard: IEEE802.3 10Base-T
IEEE802.3u 100Base-TX, IEEE802.3x flow control
IEEE802.1d Spanning Tree
IEEE802.1w Rapid Spanning Tree (RSTP)
IEEE 802.1Q VLAN
IEEE802.1p Class of Service

Performance

Switch Technology:
Store and Forward Technology with 3.2Gbps Switch Fabric.
System Throughput: 14,880pps for Ethernet and 148,800pps for Fast Ethernet and transfer packet size from 64 to 1522Bytes
MAC Address: 2K MAC
Packet Buffer: 1Mbits

Management

Configuration: Web browser. TFTP update, configuration backup/restore, DHCP client, warm reboot, reset to default, Admin password, Port Speed/Duplex control, status and statistics
VLAN: Port Based VLAN, Tag VLAN. VLAN ID 1 to 4094. 64 VLAN groups in maximum, Management VLAN
Quality of Service: Meets IEEE802.1p class of service, per port 4 priority queues, Layer 3 IPv4 TOS/DiffServ
Rate Control: Support ingress and egress packet filtering by different types of packet format combination.
Packet filter: 4 types of packet filter rule, All packets, Broadcast/ multicast/ unknown unicast packet, broadcast/ multicast packet or broadcast packet only
IGMP Snooping: Compliance with IGMP v1/v2 and IGMP Query mode. Maximum IGMP groups up to 256
Timer: Support Simple Network Time Protocol (SNTP) to synchronize time from internet.
Firmware upgrade: TFTP firmware upgrade.
Port Mirror: TX/RX only, both of TX and RX packets

Network Redundancy

Super Ring: Recovery time less than 20ms and compatible with JetNet 3500, JetNet 4500 and JetNet 5010G series.
Spanning Tree: IEEE802.1D Spanning Tree and IEEE802.1w Rapid Spanning Tree

Interface

Number of Ports: 5/8 x 10/100Base-TX with Auto MDI/ MDI-X, Auto-Negotiation functions
Connectors: RJ-45
Terminal Block: 6-pin for 2 x power input and 1 relay output
DC power Jack x 1
Cables: CAT-3, CAT-4, CAT-5 unshielded twisted pair or shielded twisted pair cable. The Link distance is 100 meters in maximum.
Diagnostic LED: Per system: Power (green) x 3, Ring Master (green) x 1, Alarm (red) x 1
Per RJ-45 port: Link (green on)/Activity(green blinking), Full duplex (Yellow on)/Collision (Yellow blinking)
DIP Switch: JetNet 4005/4008: 1 x 6/9-pin DIP Switch
DIP switch #1 ~#5/8:Port Link Down Alarm Enable (On)/ Disable(Off)
DIP switch #6/9:Ring Master Enable(On)/Disable(Off)
Relay Alarm: Dry Relay output with 1A@24V ability.

Power Requirements

System Power: 2 power input by terminal block
Input Voltage: DC 24V (12~48V) with Reverse Polarity Protection
Power Consumption:
JetNet 4005: 3.1 Watts @ DC 24V
JetNet 4008: 5.04 Watts @ DC 24V

Mechanical

Installation: DIN-Rail mount or Wall Mount
Case: IP-31 grade aluminum metal case
Dimension:
135mm(H) x 53mm (W) x 105mm (D) (without DIN rail clip)
Weight: 1.1kg with package, 0.725kg without package

Environmental

Operating Temperature:-20 ~70°C
Operating Humidity: 5% ~ 95%, (non-condensing)
Storage Temperature: -40 ~ 85°C
Hi-Pot: 1.2KV for all ports and power

Regulatory Approvals

EMI: FCC Class A, CE/EN55022.
EMS:EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11
Safety: CE/EN60950, UL/cUL60950
Shock: IEC60068-2-27
Vibration: IEC60068-2-6
Free Fall: IEC60068-2-32
MTBF:
JetNet 4005: 305,482 Hours
JetNet 4008: 319,175 Hours
MIL-HDBK-217F GB standard
Warranty: 5 years

Ordering Information

JetNet 4005 Industrial 5-port Web-Managed Fast Ethernet Switch

JetNet 4008 Industrial 8-port Web-Managed Fast Ethernet Switch

Includes:

- JetNet 4005 / 4008
- Wall mount panel/Quick Installation Guide

JetNet 4008f

Industrial 8-port Web-Managed Fast Ethernet Fiber Switch



- 6-port 10/100 TX and 2 multi-mode or single-mode fiber ports Web-Managed Fast Ethernet Switch
- 3.2Gbps Switch Fabric with excellent data exchange performance
- Super Ring technology, back up system recovery time less than 20ms and up to 250 sets
- IGMP snooping v1/v2, VLAN, QoS, CPU Rate control for network management
- Web-based configuration
- Aluminum case with IP-31 grade protection
- DIN-Rail/Wall-Mounting/Desktop Installation
- -10~70°C operating temperature for hazardous environment application

Overview

The JetNet 4008f is a 5/8-port 10/100TX Industrial Web-Managed Fast Ethernet Rail Switch with excellent software features including port control, port status, VLAN, Port Mirror, IGMP snooping with query, Quality of Service, Simple Network Time Protocol (SNTP), DHCP Client, STP/RSTP and Super Ring.

One of the main challenges in industrial automation applications is to ensure permanent uptime in the system. To meet this requirement, JetNet 4008f provides Super Ring mechanism which has 20ms recovery time - faster than RSTP.

JetNet 4008f has a built-in relay output for port and power outage alarms. The fault relay alarm will inform you whenever there is any port link down. Just move up the DIP switch and the fault relay alarm will be functioning! To be operated in a harsh operating environment, JetNet 4008f is equipped with dual power inputs with redundancy and rigid aluminum case with excellent heat radiation for -10~70°C environment operating temperature.

Web Management for Easy Configuration & Non-stop Super Ring

Through the versatile and User-friendly interface configuration of VLAN, QoS, IGMP and event warning are not only to made easy, but also save your time and money.

Super Ring is Korenix Ring redundancy technology. The recovery time is <20 ms, the 1st Ring Port of the R.M. is the primary path. The 2nd Ring Port of the R.M. is the block path. Once the primary path is failed, the 2nd path will be recovered within 20ms which gives you fault-tolerant connection.

Fiber Optic Port Options & High-Speed Transmission

Single-mode and Multi-mode fiber optic ports meet your needs for long distance transmission up to 30KM.

Excellent data transmission performance is provided for you. No traffic will be delayed with the transmission rate up to 3.2Gbps.

Fault Relay Output & Redundant Power Inputs

One relay output is an important feature to let you know when there is any event of port failure. Just move up the DIP switch, the fault relay alarm will be activated! To be operated in a harsh environment, the

JetNet 4008f is equipped with dual power inputs with redundancy and rigid aluminum case with excellent heat radiation for -10~70°C environment operating temperature.

True Reliability & Easy Installation

With the 1.2KV Hi-Pot isolation protection, CE/FCC regulatory approvals and 5-year global warranty, the JetNet 4008f is your reliable choice for hazardous

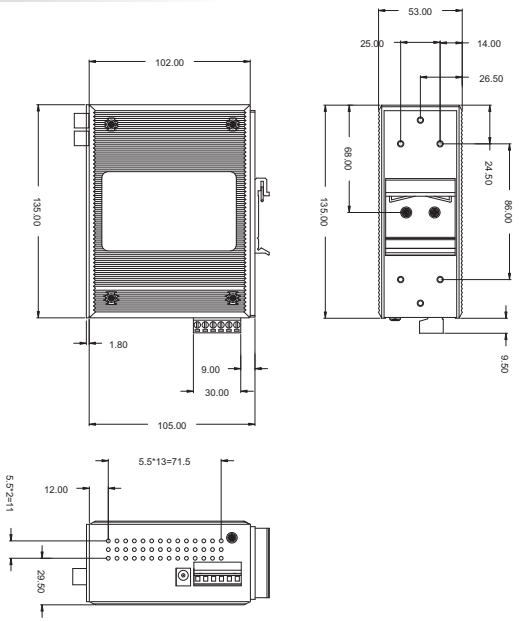
applications. JetNet 4008f can be easily wall mounted and mounted directly on DIN rail.

Brilliant Idea for Hazardous Environment Application

The IP31 rigid aluminum flat casing and wide operation temperature range ensure reliable operation for harsh environment.

Extended operating temperature range is available for project-based request.

Dimensions (Unit –mm)



Specification

Technology

Standard:
IEEE802.3 10Base-T
IEEE802.3u 100Base-TX/100Base-FX
IEEE802.3x flow control
IEEE802.1d Spanning Tree
IEEE802.1w Rapid Spanning Tree (RSTP)
IEEE 802.1Q VLAN
IEEE802.1p Class of Service

Performance

Switch Technology:
Store and Forward Technology with 3.2Gbps Switch Fabric.
System Throughput: 14,880pps for Ethernet and 148,800pps for Fast Ethernet and transfer packet size from 64 to 1522Bytes
MAC Address: 2K MAC
Packet Buffer: 1Mbits

Management

Configuration: Web browser. TFTP update, configuration backup/restore, DHCP client, warm reboot, reset to default, Admin password, Port Speed/Duplex control, status and statistics,
VLAN: Port Based VLAN, Tag VLAN. VLAN ID 1 to 4094. 64 VLAN groups in maximum, Management VLAN
Quality of Service: Meets IEEE802.1p class of service, per port 4 priority queues, Layer 3 IPv4 TOS/DiffServ
Rate Control: Support ingress and egress packet filtering by different types of packet format combination.
Packet filter: 4 types of packet filter rule, All packets, Broadcast/ multicast/ unknown unicast packet, broadcast/ multicast packet or broadcast packet only
IGMP Snooping: Compliance with IGMP v1/v2 and IGMP Query mode. Maximum IGMP groups up to 256
Timer: Support Simple Network Time Protocol (SNTP) to synchronize time from internet.
Firmware upgrade: TFTP firmware upgrade.
Port Mirror: TX/RX only, both of TX and RX packets

Network Redundancy

Super Ring: Recovery time less than 20ms and compatible with JetNet 3500, JetNet 4500 and JetNet 5010G series.
Spanning Tree: IEEE802.1D Spanning Tree and IEEE802.1w Rapid Spanning Tree

Interface

Number of Ports:
6 x 10/100Base-TX with Auto MDI/MDI-X, Auto-Negotiation
2 x 100Base-FX/SC connector for multi-mode /single-mode
Connectors:
10/100TX: RJ-45
100Base-FX: SC/Multi-mode, SC/Single-mode
Terminal Block: 6-pin for 2 x power input and 1 relay output
DC power Jack x 1
Cables:
CAT-3, CAT-4, CAT-5 unshielded twisted pair or shielded twisted pair cable. The Link distance is 100 meters in maximum
Multi-mode Fiber (JetNet 4008f-m):
50/125um, 62.5/125um, available link distance to 2KM
Single-mode Fiber (JetNet 4008f-s):
9/125um, 10/125um, available link distance to 30KM

Fiber Transceiver:
JetNet 4008f-m
Wave-length:1310nm
Tx Power:-19~-14dBm(Min.)
Rx Sensitivity:-31~-14dBm(Max.)
Link Budget:12dBm
JetNet 4008f-s
Wave-length:1310nm
Tx Power:-15~-8dBm(Min.)
Rx Sensitivity:-34~-8dBm(Max.)
Link Budget:19dBm
Diagnostic LED:
Per system: Power (green) x 3, Ring Master (green) x 1, Alarm (red) x 1
Per port: Link (green on)/Activity(green blinking), Full duplex (Yellow on)/Collision (Yellow blinking)
DIP Switch: 1 x 9-pin DIP Switch
DIP switch #1:Port Link Down Alarm Enable (On)/ Disable(Off)
DIP switch #9:Ring Master Enable(On)/Disable(Off)
Relay Alarm: Dry Relay output with 1A@24V ability

Power Requirements

System Power: 2 power input by terminal block
Input Voltage: DC 24V (12~48V) with Reverse Polarity Protection
Power Consumption: 7.68 Watts @ DC 24V

Mechanical

Installation: DIN-Rail mount or Wall Mount
Case: IP-31 grade aluminum metal case
Dimension:
135mm(H) x 53mm (W) x 105mm (D) (without DIN rail clip)
Weight:
1.05kg with package, 0.675kg without package

Environmental

Operating Temperature:-10 ~70°C
Operating Humidity: 5% ~ 95%, (non-condensing)
Storage Temperature: -40 ~ 85°C
Hi-Pot: 1.2KV for all ports and power

Regulatory Approvals

EMI: FCC Class A, CE/EN55022.
EMS:
EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11
Safety: CE/EN60950, UL/cUL60950
Shock: IEC60068-2-27
Vibration: IEC60068-2-6
Free Fall: IEC60068-2-32
MTBF: 297,077 Hours
MIL-HDBK-217F GB standard
Warranty: 5 years

Ordering Information

JetNet 4008f Industrial 8-port Web-Managed Fast Ethernet Fiber Switch
Includes:
- JetNet 4008f (JetNet 4008f-m,2km/JetNet 4008f-s,30km)
- Wall mount panel, Quick Installation Guide, CD User manual

JetNet 3008

Industrial 8-port Fast Ethernet Switch



- 8 10/100TX Ports with Auto MDI/MDI-X
- Compact size with full power redundancy
- 2.0Gbps Switch Fabric
- QoS for packet forwarding precedence
- Broadcast storm packet filtering.
- Port and power event alarm
- IP-31 aluminum alloy case
- DIN rail and wall mount
- Dual power input DC12~48V
- AC 1.5KV Hi-pot isolation protection

CE FC RoHS

Overview

The JetNet 3008 is a new generation 8-port compact Fast Ethernet switch equipped with 2.0Gbps Packet Switch engine as particular packet forwarding and filtering mechanism to fulfill industrial communications on the filed sites. It provides the packet forwarding ability to handle 64~1552 Bytes packet size into 2 priority queues which comply with quality of service for the best data forwarding performance.

In addition, for the best network performance, both broadcast storm filtering and flow control functions can ensure your data traffic deliver to destination without traffic congestions.

To survive under hazard environments, it's equipped with 2 redundant power inputs, as the wide range input avoiding any power interruption and also operating between -25~70°C temperature range. For the purposes of easy maintenance, JetNet 3008 has one alarm-relay for port link events and power events via alarm to assist engineers with notifications on the filed sites. With the JetNet 3008, users enjoy the superiority and the reliable performance on the filed site applications.

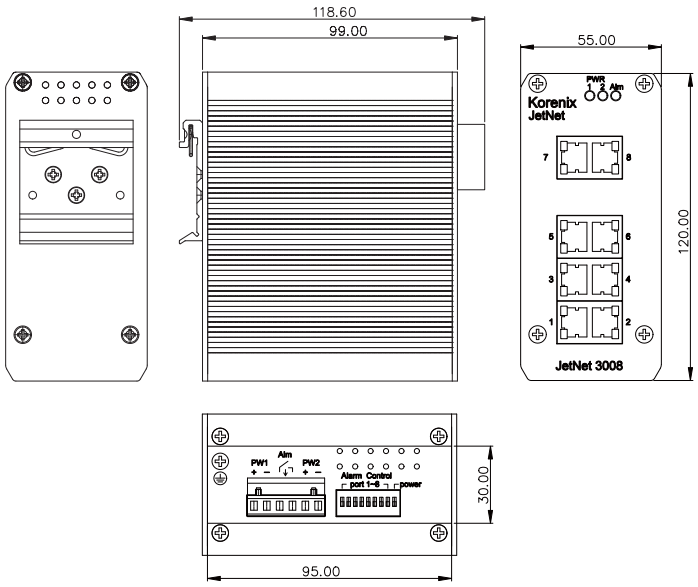
Redundant Power Inputs & True Reliability

The JetNet 3008 has dual DC24V inputs, and can also operate on 12V~48V. Dual power inputs and built-in reverse power polarity protection are designed as the redundant power system to ensure power continuity. With the 1.5KV Hi-Pot isolation protection, CE/FCC regulatory approvals, and 5-year global warranty, the JetNet 3008 is the reliable choice for hazardous applications.

Plug-and-Play Switch & High-Speed Transmission

JetNet 3008 requires no user setup and immediately starts operating as soon as you power them up. Excellent data transmission performance is provided for you. No traffic will be delayed with the transmission rate up to 2.0Gbps.

Dimensions (Unit –mm)



Industrial PoE Switch
IP67/68 Ethernet Switch
Rackmount Managed Switch
Gigabit Switch
Redundant Switch
Entry-Level Switch
Networking Computer
Communication Computer
Ethernet I/O Server
Serial Device Server
Media Converter
Multiport Serial Card
SFP Module
Din Rail Power Supply

Specification

Technology

Standard:
IEEE802.3 10Base-T
IEEE802.3u 100Base-TX
IEEE802.3x flow control
Switch Technology:
Store and forward technology and with 2.0Gbps Switch Fabric

System Performance

Aggregate System Throughput: 1.49Mpps
MAC Address: 2K MAC
Packet Buffer: 448Kbits
Transfer Packet Size:
148,80pps for Ethernet 10Base-T
148810pps for Fast Ethernet
Packet size from 64~1552 Bytes (Long Packet forwarding ability)
Broadcast storm control: Default enabled.
traffic threshold: 200 packets/ Sec. @100Mbps; 20 packets/Sec. @ 10Mbps
Class of Service: Provides 2 packet forwarding Queues: High Queue (4~7), Low Queue (0~3)
Quality of Service: Default Enabled. Supports VLAN tag priority and IPv4 packet precedence
Event alarm relay: Provides port and power event alarm; Enabled by 9-PIN Dipswitch

Interface

Number of Ports:
8 x 10/100 Base-TX with Auto MDI/MDI-X, Auto-Negotiation function
Connectors:
10/100 Base-TX: RJ-45
Power: Terminal Block
Alarm relay: Terminal block connector with 1A @DC24V carry ability
Cables:
CAT-3, CAT-4, CAT-5 unshielded twisted pair or shielded twisted pair cable. The Link distance is 100 meters in maximum

Diagnostic LED:
Per system: Power (Green) x2
10/100TX port: Link (Green on) / Activity (Green blinks)
100Mbps Link (Yellow on)/ 10Mbps Link (Yellow off)
Alarm: Port /Power Event (Red on)

Power Requirements

System Power: 2 Power inputs with redundancy and polarity reverse protection
Voltage: DC 24V (12~48V)
Power Consumption: 8 Watts @ DC 24V

Mechanical

Installation: DIN-Rail mount
Case: IP-31 grade aluminum metal case
Dimension:
120mm(H) x 55mm (W) x 108mm (D) (without DIN rail clip)
Weight:
0.775kg with package
0.525kg without package

Environmental

Operating Temperature: -25 ~70℃
Operating Humidity: 0% ~ 95%, (non-condensing)
Storage Temperature: -40 ~ 85 ℃
Storage Humidity: 0% ~ 95%, (non-condensing)

Regulatory Approvals

EMI: FCC class A, CE/EN55022 class A
EMS:
EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27
Vibration: IEC60068-2-6
Free Fall: IEC60068-2-32
MTBF: 400,000hours *MIL-HDBK-217F GB(MILITARY HANDBOOK) standard
Warranty: 5 years

Ordering Information

JetNet 3008 Industrial 8-port Fast Ethernet Switch

Includes:

- JetNet 3008
- Quick Installation Guide
- CD User manual

JetNet 3008f

Industrial 8-port Fast Ethernet Fiber Switch



- 6 10/100TX Ports with Auto MDI/MDI-X
- 2 100FX, Multi-mode/Single-mode
- Compact size with full power redundancy
- 2.0Gbps Switch Fabric
- QoS for packet forwarding precedence
- Broadcast storm packet filtering
- Port and power event alarm
- IP-31 aluminum alloy case
- DIN rail and wall mount
- Dual power input DC12~48V
- AC 1.5KV Hi-pot isolation protection

CE FC RoHS

Overview

The JetNet 3008f is a new generation of the 8-port compact Fast Ethernet switch equipped with 2.0Gbps Packet Switch engine as particular packet forwarding and filtering mechanism to fulfill industrial communications on the filed sites. It provides the graceful packet forwarding ability to handle 64~1552 packet size into 2 priority queues which comply with quality of service for the best data forwarding performance.

In addition, for the best network performance both of broadcast storm filtering and flow control functions can ensure your data traffic deliver to destination without traffic congestion. To avoid interferences as well as to extend the network coverage, JetNet 3008f implements 2 100Mbps fiber ports with multi-mode 2KM or single-mode 30KM transceiver in order to achieve stable and long-distant transmissions.

To survive under hazard environments, it is equipped with 2 redundant power inputs, as the wide range input avoiding any power interruption and also operating between -10~70°C temperature range. For the purpose of easy maintenance, JetNet 3008f has one alarm-relay for port link events and power events via alarm to assist engineers with notifications on the filed sites. With the JetNet 3008f, users enjoy the superiority and the reliable performance on the filed site applications.

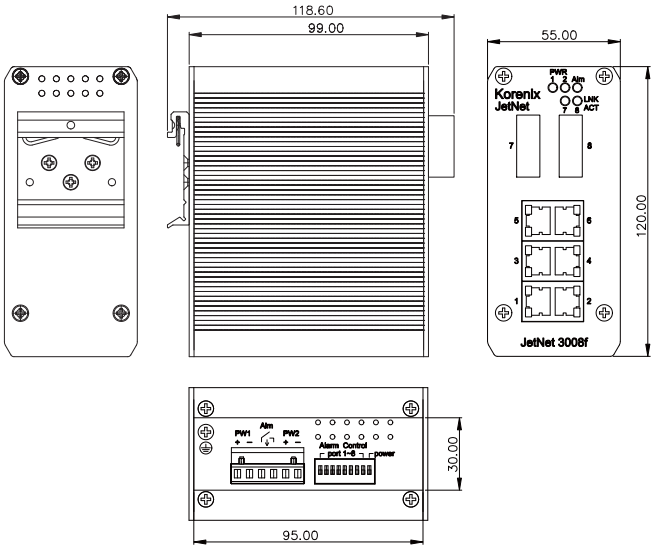
Redundant Power Inputs & True Reliability

The JetNet 3008f has dual DC24V inputs, and can also operate on 12V~48V. Dual power inputs and built-in reverse power polarity protection are designed as the redundant power system to ensure power continuity. With the 1.5KV Hi-Pot isolation protection, CE/FCC regulatory approvals, and 5-year global warranty, the JetNet is the reliable choice for hazardous applications.

Plug-and-Play Switch & High-Speed Transmission

JetNet 3008f require no user setup and immediately start operating as soon as you power them up. Excellent data transmission performance is provided for you. No traffic will be delayed with the transmission rate up to 2.0Gbps.

Dimensions (Unit –mm)



Specification

Technology

Standard:
IEEE802.3 10Base-T
IEEE802.3u 100Base-TX, 100Base-FX
IEEE802.3x Flow Control
IEEE802.1p Class of Service
IEEE802.1Q Quality of Service
Switch Technology:
Store and forward technology with 2.0Gbps Switch Fabric

System Performance

Aggregate System Throughput: 1.49Mpps
MAC Address: 2K MAC
Packet Buffer: 448Kbits
Transfer Packet Size:
148,80pps for Ethernet 10Base-T
148810pps for Fast Ethernet
Packet size from 64~1552 Bytes (Long Packet forwarding ability)
Broadcast storm control: Default enabled.
Broadcast Traffic threshold: 200 packets/ Sec.@100Mbps; 20 packets/Sec. @ 10Mbps
Class of Service: Provides 2 packet forwarding Queues: High Queue (4~7), Low Queue (0~3)
Quality of Service: Default Enabled. Supports VLAN tag priority and IPv4 packet precedence
Event alarm relay: Provides port and power event alarm; Enabled by 9-PIN Dipswitch

Interface

Number of Ports:
6 x 10/100 Base-TX with Auto MDI/MDI-X, Auto-Negotiation function
2 100Mbps Fiber in multi-mode (JetNet 3008f-m) or single-mode (JetNet 3008f-s)
Connectors: 10/100 Base-TX: RJ-45
100Mbps Fiber: SC
Power: Terminal Block
Alarm relay: Terminal block connector with 1A @DC24V carry ability
Cables:
CAT-3, CAT-4, CAT-5 or CAT-5e unshielded twisted pair or shielded twisted pair cable. The Link distance is 100 meters in maximum.
JetNet 3008f-m: multi-mode optical fiber, 50~62.5/125um, 2KM
JetNet 3008f-s: single-mode optical fiber, 8~10/125um, 30KM
Fiber Transceiver:
JetNet 3008f-m
Link Distance: 2KM (Max.)
Wave-length: 1310nm
Min Tx Power:-20dBm
Max Tx Power:-14dBm
Min Rx Sensitivity:0dBm
Max Rx Sensitivity:-31dBm
Link budget:11dBm
JetNet 3008f-s
Link Distance: 30KM (Max.)
Wave-length:1310nm
Min Tx Power:-15dBm
Max Tx Power:-8dBm
Min Rx Sensitivity:0dBm
Max Rx Sensitivity:-34dBm
Link budget:19dBm
Diagnostic LED:
Per system: Power (Green) x2
10/100TX port: 10/100TX port: Link (Green on) / Activity (Green blinking)
100Mbps Link (Yellow on)/ 10Mbps Link (Yellow off)
100Mbps Fiber: Link (Green on)/Activity (Green blinking)
Alarm: Port /Power Event (Red on)

Power Requirements

System Power: 2 Power inputs with redundancy and polarity reverse protection
Voltage: DC 24V (12~48V)
Power Consumption: 12 Watts @ DC 24V

Mechanical

Installation: DIN-Rail mount
Case: IP-31 grade aluminum metal case
Dimension:
120mm(H) x 55mm (W) x 108mm (D) (without DIN rail clip)
Weight:
0.97kg with package
0.54kg without package

Environmental

Operating Temperature: -10 ~70℃
Operating Humidity: 0% ~ 95%, (non-condensing)
Storage Temperature: -40 ~ 85 ℃
Storage Humidity: 0% ~ 95%, (non-condensing)

Regulatory Approvals

EMI: FCC class A, CE/EN55022 class A
EMS: EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11
Shock: IEC60068-2-27
Vibration: IEC60068-2-6
Free Fall: IEC60068-2-32
MTBF: 400,000hours *MIL-HDBK-217F GB(MILITARY HANDBOOK) standard
Warranty: 5 years

Ordering Information

JetNet 3008f-m Industrial 8-port Fast Ethernet Fiber Switch, 2 SC/Multi-mode, 2KM
JetNet 3008f-s Industrial 8-port Fast Ethernet Fiber Switch, 2 SC/Single-mode, 30KM
Includes:

- JetNet 3008f-m / JetNet 3008f-s
- Quick Installation Guide
- CD User manual

JetNet 3005

Industrial 5-port Fast Ethernet Switch



- 5 10 / 100 TX redundant Fast Ethernet Switch
- 3.2Gbps Switch Fabric with excellent data exchange performance
- Support 1.2KV Hi-Pot isolation protection
- Redundant power input DC 12~48V
- Aluminum case with IP-31 grade protection
- -20~70°C operating temperature for hazardous environment
- application

Overview

JetNet 3005 is low cost 5 port fast Ethernet switch, featuring an IP31 grade rigid aluminum case with excellent heat radiation ability. To be operated with dual power sources, JetNet 3005 is equipped with 2 power inputs in redundancy.

To provide excellent transmission performance, JetNet 3005 adopts "store and forwarding" technology with a built-in 3.2Gbps switch fabric to deliver non-blocking and full wire speed performance on each port.

Plug-and-Play Switch & High-Speed Transmission

JetNet 3005 series requires no user setup and immediately starts operating as soon as you power them up.

Excellent data transmission performance is provided for you. No works will be delayed with the transmission rate up to 3.2Gbps.

Redundant Power Inputs & True Reliability

Best with two DC24V input, and also compatible with range from 12V~48V. Dual power input and built-in reverse power polarity protection are designed as the redundant power system to ensure your power continuity.

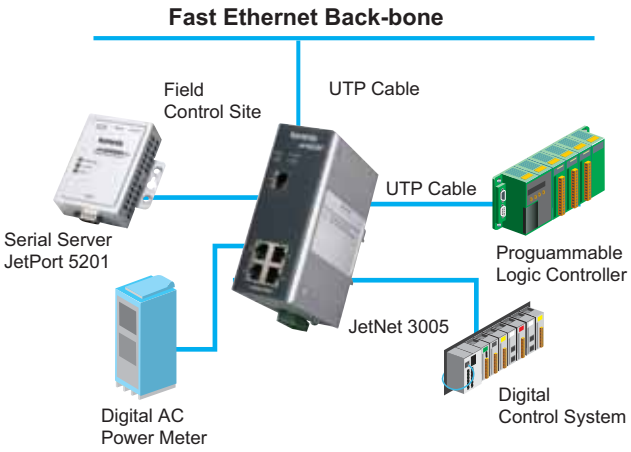
With the 1.2KV Hi-Pot isolation protection, CE/FCC regulatory approvals, and 5-year global warranty, JetNet 3005 are your reliable choice for hazardous applications.

Fault Relay Output & Hazardous Environment Application

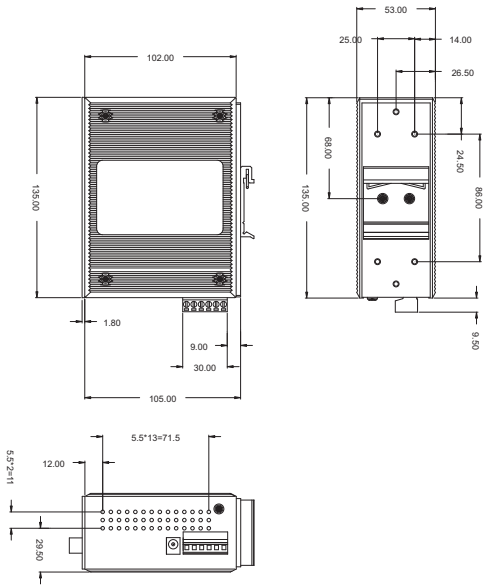
One relay output is an important feature to let you know when there is any event of port link down. Just move up the DIP switch, the fault relay alarm will be functioning!

The IP31 rigid aluminum flat casing and wide operation temperature range ensure reliable operation for harsh environment. Extended operating temperature range is available for project-based request.

JetNet 3005 Appearance



Dimensions (Unit –mm)



Industrial PoE Switch
IP67/68 Ethernet Switch
Rackmount Managed Switch
Gigabit Switch
Redundant Switch
Entry-Level Switch
Networking Computer
Communication Computer
Ethernet I/O Server
Serial Device Server
Media Converter
Multiport Serial Card
SFP Module
Din Rail Power Supply

Specification

Technology

Standard:
IEEE802.3 10Base-T
IEEE802.3u 100Base-TX
IEEE802.3x flow control
Switch Technology:
Store and forward technology and with 3.2Gbps switch bandwidth
Aggregate System Throughput: 1.49Mpps
MAC Address: 1K MAC
Packet Buffer: 512Kbits
Transfer performance: 14,880pps for Ethernet and 148,800pps for Fast Ethernet and handle packet size from 64 to 1522Bytes

Interface

Number of Ports: 5 x 10/100 Base-TX with Auto MDI/MDI-X, Auto-Negotiation function
Connectors:
10/100TX: RJ-45
Terminal Block: 6-pin for 2 x power input
DC power Jack x 1
Cables:
CAT-3, CAT-4, CAT-5 unshielded twisted pair or shielded twisted pair cable. The Link distance is 100 meters in maximum
Diagnostic LED:
Per system: Power (green) x3
Per RJ-45 port: Link (green on)/Activity(green blinking), Full duplex (Yellow on)/Collision (Yellow blinking)

Power Requirements

System Power: 2 power input by terminal block
Input Voltage: DC 24V (12~48V) with reverse polarity protection
Power Consumption: 2.5 Watts @ DC 24V

Mechanical

Installation: DIN-Rail mount or Wall Mount
Case: IP-31 grade aluminum metal case
Dimension:
135mm(H) x 53mm (W) x 105mm (D) (without DIN rail clip)
Weight:
1.016kg with package
0.68kg without package

Environmental

Operating Temperature: -20 ~70℃
Operating Humidity: 5% ~ 95%, (non-condensing)
Storage Temperature: -40 ~ 85 ℃
Hi-Pot: 1.2KV for all ports and power

Regulatory Approvals

EMI: FCC Class A, CE/EN55022.
EMS:
EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11
Safety: CE/EN60950, UL/cUL
Shock: IEC60068-2-27
Vibration: IEC60068-2-6
Free Fall: IEC60068-2-32
MTBF: 448,564 Hours MIL-HDBK-217F GB standard
Warranty: 5 years

Ordering Information

JetNet 3005 Industrial 5-port Fast Ethernet Switch

Includes:

- JetNet 3005
- Wall mount panel
- Quick Installation Guide
- CD User manual

JetNet 3005f

Industrial 5-port Redundant Fast Ethernet Fiber Switch



- 4 10/100 TX ports and 1 multi-mode or single-mode fiber Fast Ethernet Switch
- 3.2Gbps Switch Fabric with excellent data exchange performance
- Support 1.2KV Hi-Pot isolation protection
- Redundant power input DC 12~48V
- Aluminum case with IP-31 grade protection
- -10~70°C operating temperature for hazardous environment application

Overview

JetNet 3005f is low cost 5 port fast Ethernet switch, featuring an IP31 grade rigid aluminum case with excellent heat radiation ability. To be operated with dual power sources, JetNet 3005f is equipped with 2 power inputs in redundancy.

To provide excellent transmission performance, JetNet 3005f adopts "store and forwarding" technology with a built-in 3.2Gbps switch fabric to deliver non-blocking and deliver a real non-blocking and full wire speed performance on each port.

Plug-and-Play Switch & High-Speed Transmission

JetNet 3005 series require no user setup and immediately start operating as soon as you power them up.

Excellent data transmission performance is provided for you. No traffic will be delayed with the transmission rate up to 3.2Gbps.

Redundant Power Inputs & True Reliability

The JetNet 3005f has dual DC24V inputs, and can also operate on 12V~48V. Dual power inputs and built-in reverse power polarity protection are designed as the redundant power system to ensure power continuity.

With the 1.2KV Hi-Pot isolation protection, CE/FCC regulatory approvals, and 5-year global warranty, , the JetNet 3005f is the reliable choice for hazardous applications.

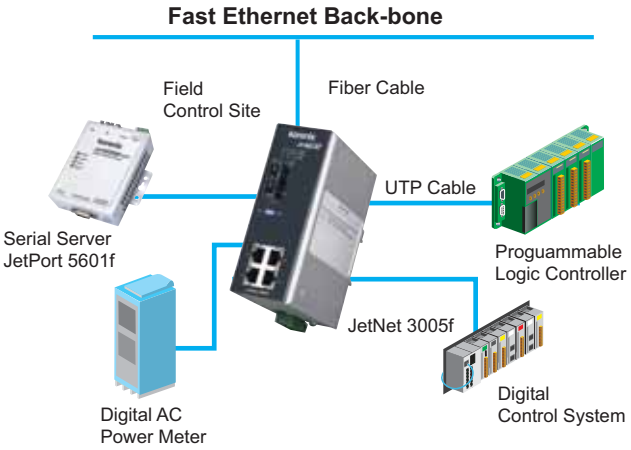
Industrial PoE Switch
IP67/68 Ethernet Switch
Rackmount Managed Switch
Gigabit Switch
Redundant Switch
Entry-Level Switch
Networking Computer
Communication Computer
Ethernet I/O Server
Serial Device Server
Media Converter
Multiport Serial Card
SFP Module
Din Rail Power Supply

Fault Relay Output & Hazardous Environment Application

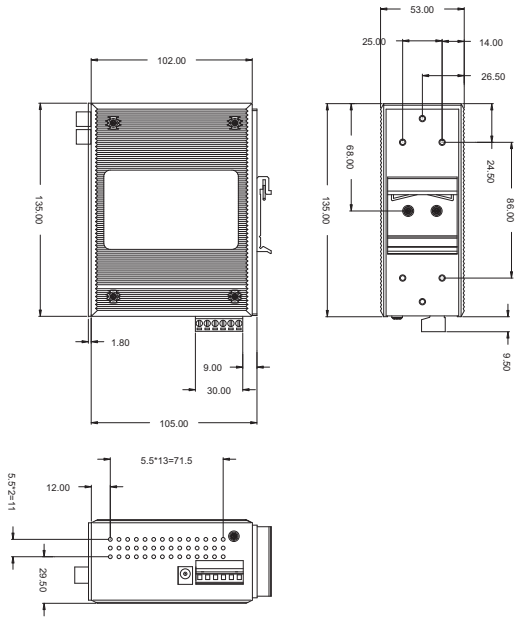
One relay output is an important feature to let you know when there is a port link down event. Just move up the DIP switch and the fault relay alarm will be functioning!

The IP31 rigid aluminum flat casing and wide operation temperature range ensure reliable operation in harsh environments.
Extended operating temperature range is available for project-based request.

JetNet 3005f Appearance



Dimensions (Unit –mm)



Specification

Technology

Standard:
IEEE802.3 10Base-T
IEEE802.3u 100Base-TX/100Base-FX
IEEE802.3x flow control
Switch Technology:
Store and forward technology and with 3.2Gbps switch bandwidth.
Aggregate System Throughput: 1.49Mpps
MAC Address: 1K MAC
Packet Buffer: 512Kbits
Transfer performance: 14,880pps for Ethernet and 148,800pps for Fast Ethernet and handle packet size from 64 to 1522Bytes

Interface

Number of Ports:
4 x 10/10Base-TX with Auto MDI/MDI-X, Auto-Negotiation function
1 x 100Base-FX for Multi-mode or Single-mode fiber
Connectors:
10/100 Base-TX: RJ-45
100Base-FX: 1 x SC
Terminal Block: 6-pin for 2 x power input
DC power Jack x 1
Cables:
RJ-45: CAT-3, CAT-4, CAT-5 unshielded twisted pair or shielded twisted pair cable. The Link distance is 100 meters in maximum
SC (Multi-mode): 50/125um or 62.5/125um fiber cable, available distance 2KM.
SC (Single-mode): 8/125um or 9/125um fiber cable, available distance 30KM
Fiber Transceiver:
JetNet 3005f-m
Wave-length:1310nm
Tx Power:-19~-14dBm(Min.)
Rx Sensitivity:-31~-14dBm(Max.)
Link Budget:12dBm

JetNet 3005f-s
Wave-length:1310nm
Tx Power:-15~-8dBm(Min.)
Rx Sensitivity:-34~-8dBm(Max.)
Link Budget:19dBm
Diagnostic LED:
Per system: Power (green) x3
Per RJ-45 port: Link (green on)/Activity(green blinking), Full duplex (Yellow on)/Collision (Yellow blinking)

Power Requirements

System Power: 2 power input by terminal block with redundancy
Input Voltage: DC 24V (12~48V) with reverse polarity protection.
Power Consumption: 3.7 Watts @ DC 24V

Mechanical

Installation: DIN-Rail mount or Wall Mount
Case: Aluminum Case with IP31 grade case protection
Dimension:
135mm(H) x 53mm (W) x 105mm (D) (without DIN rail clip)

Environmental

Operating Temperature: -10 ~70°C
Operating Humidity: 5% ~ 95%, (non-condensing)
Storage Temperature: -40 ~ 85 °C
Hi-Pot: 1.2KV for all ports and power

Regulatory Approvals

EMI: FCC Class A, CE/EN55022.
EMS:
EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11
Safety: CE/EN60950
Shock: IEC60068-2-27
Vibration: IEC60068-2-6
Free Fall: IEC60068-2-32
MTBF: 380,973 Hours
MIL-HDBK-217F GB standard
Warranty: 5 years

Ordering Information

JetNet 3005f-m Industrial 5-Port Redundant Fast Ethernet Fiber Switch, 1 SC/Multi-mode, 2KM

Includes:

- JetNet 3005f-m
- Wall mounting plate and six screws
- Quick Installation Guide
- CD User manual

JetNet 3005f-s Industrial 5-Port Redundant Fast Ethernet Fiber Switch, 1 SC/Single-mode, 30KM

Includes:

- JetNet 3005f-s
- Wall mounting plate and six screws
- Quick Installation Guide
- CD User manual

JetNet 2005

Industrial 5-port Compact Fast Ethernet Switch



- 5-port 10/100 TX Compact Fast Ethernet switch
- 3.2Gbps Switch Fabric with excellent data exchange performance
- Support 1.5KV Hi-Pot isolation protection
- Dual mode for power input, AC18-27V/DC18-32V
- Fault relay alarm
- Aluminum case with IP-31 grade protection
- -20~70°C operating temperature for hazardous environment application

CE FC RoHS

Overview

Korenix JetNet 2005 is an Industrial 5-port 10/100Base-TX Ethernet switch. JetNet 2005 adopts slim industrial design to save rail space for compact systems. In order to survive under harsh environment, JetNet 2005 features an industrial-grade aluminum case with IP31 grade protection ability against dust and water. JetNet 2005 provides one relay output for port link down events, which is enabled/ disabled by the DIP switch. JetNet 2005 is powered by 18~27VAC or 18~32VDC from a 4-pin terminal block.

Plug-and-Play Switch & High-Speed Transmission

JetNet 2005 series require no user setup and immediately start operating as soon as you power it up..

Excellent data transmission performance is provided for you. No traffic will be delayed with the transmission rate up to 3.2Gbps.

Compact Size & Fault Relay Output

The slim-line design makes it an ideal model that would physically fit in a network environment with limited space.

One relay output is an important feature to let you know when there is any event of port link down. Just move up the DIP switch, the fault relay alarm will be functioning!

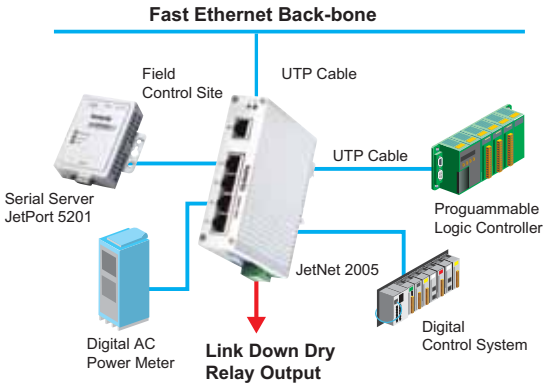
Dual Mode for Power Input & True Reliability for the Best Support

AC 18V~27V or DC 18V~32V is available for different operating environments.
With the 1.5KV Hi-Pot isolation protection, CE/FCC regulatory approvals, and 5-year global warranty, JetNet 2005 series are your reliable choice for hazardous applications.

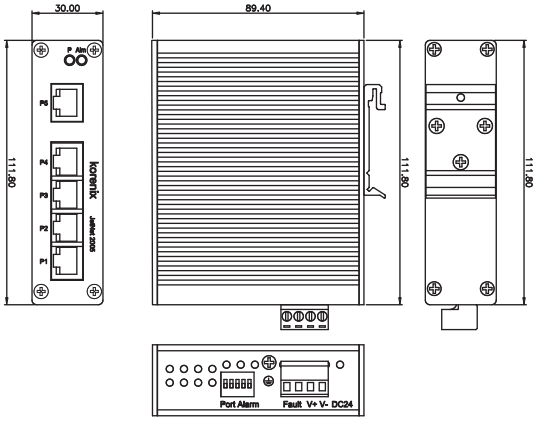
Easy Installation & Brilliant Idea for Hazardous Environment Application

JetNet 2005 series can be easily wall mounted and mounted directly on DIN rail.
The IP31 rigid aluminum flat casing and wide operation temperature range ensure reliable operation for harsh environment. Extended operating temperature range is available for project-based request.

JetNet 2005 Application



Dimensions (Unit –mm)



Industrial PoE Switch
IP67/68 Ethernet Switch
Rackmount Managed Switch
Gigabit Switch
Redundant Switch
Entry-Level Switch
Networking Computer
Communication Computer
Ethernet I/O Server
Serial Device Server
Media Converter
Multiport Serial Card
SFP Module
Din Rail Power Supply

Specification

Technology

Standard:
IEEE802.3 10Base-T
IEEE802.3u 100Base-TX
IEEE802.3x flow control
Switch Technology:
Store and forward technology and with 3.2Gbps switch fabric
Aggregate System Throughput: 1.49Mpps

Interface

Number of Ports:
5 x 10/100 Base-TX with Auto MDI/MDI-X, Auto-Negotiation function
Connectors:
10/100 Base-TX: RJ-45
Power/Relay: 4-pin terminal block
Cables:
CAT-3, CAT-4, CAT-5 unshielded twisted pair or shielded twisted pair cable. The Link distance is 100 meters in maximum
Diagnostic LED:
System: Power (green), Fault (red on)
RJ-45 port: 100Mbps Link (green on)/Activity(green blinking)
10Mbps Link (yellow on)/Activity(yellow blinking)

Power Requirements

System Power:
2 pins terminal block for power input.
DC 12~48V with reverse polarity protection.
AC 18~36V, 47~63Hz
Power Consumption: 3.0 Watts @ DC 24V

Mechanical

Installation: DIN-Rail mount or Wall Mount
Case: Aluminum case with IP-31 protection
Dimension:
111.8mm(H) x 30mm (W) x 98.2mm (D) (with DIN rail clip)
111.8mm(H) x 30mm (W) x 89mm (D) (without DIN rail clip)
Weight:
372g with package
290g without package

Environmental

Operating Temperature: -20 ~70°C
Operating Humidity: 0% ~ 95%, (non-condensing)
Storage Temperature: -40 ~ 85 °C
Hi-Pot: 1.5KV for all ports and power

Regulatory Approvals

EMI: FCC Class A, CE/EN55022.
EMS:
EN61000-4-2
EN61000-4-3
EN61000-4-4
EN61000-4-5
EN61000-4-6
EN61000-4-8
EN61000-4-11
Safety: CE/EN60950
Shock: IEC60068-2-27
Vibration: IEC60068-2-6
Free Fall: IEC60068-2-32
MTBF: 818,646 Hours, MIL-HDBK-217F GB standard
Warranty: 5 years

Ordering Information

JetNet 2005 Industrial 5-port Compact Fast Ethernet Switch

Includes:

- JetNet 2005
- Quick Installation Guide

JetNet 2005f

Industrial 5-port Compact Fast Ethernet Fiber Switch



- 4-ports 10/100 TX and 1 multi-mode or single-mode fiber compact Fast Ethernet Switch
- 3.2Gbps Switch Fabric with excellent data exchange performance
- Support 1.5KV Hi-Pot isolation protection
- Dual mode for power input, AC18-27V/DC18-32V
- Fault relay alarm
- Aluminum case with IP-31 grade protection
- -10~70°C operating temperature for hazardous environment application

CE FC RoHS

Overview

Korenix JetNet 2005f is an Industrial with 4 ports 10/100Base-TX and one 100Base-FX Fast Ethernet switch. With the fiber uplink function, it enlarges the transmission distance to 2KM by multi-mode fiber (JetNet 2005f-m) or 30KM by single- mode fiber (JetNet 2005f-s).

The JetNet 2005f adopts slim and rigid aluminum case to save rail space and provides good heat radiation ability for compact system requirement.

In order to be operated in harsh environment, JetNet 2005f is equipped with IP31 grade case design to meet the requirements of drop-water and dust proof. The JetNet 2005f also provides one relay output for port error events, which is enabled/ disabled by the dip switch. Moreover, JetNet 2005f has good immunity to against unstable power source and can accept AC 18~27V or DC 18~32V power input by 4-pin terminal block.

Plug-and-Play Switch & High-Speed Transmission

JetNet 2005 series requires no user setup and immediately starts operating as soon as you power it up.

Excellent data transmission performance is provided for you. No traffic will be delayed with the transmission rate up to 3.2Gbps.

Compact Size & Fault Relay Output

The slim-line design makes it an ideal model that would physically fit in a network environment with limited space.

One relay output is an important feature to let you know when there is any event of port link down. Just move up the DIP switch, the fault relay alarm will be functioning!

Fiber Optic Port Options for Long Distance Requirement & Dual Mode for Power Input

Single-mode and Multi-mode fiber optic ports meet your needs for long distance transmission up to 30KM.

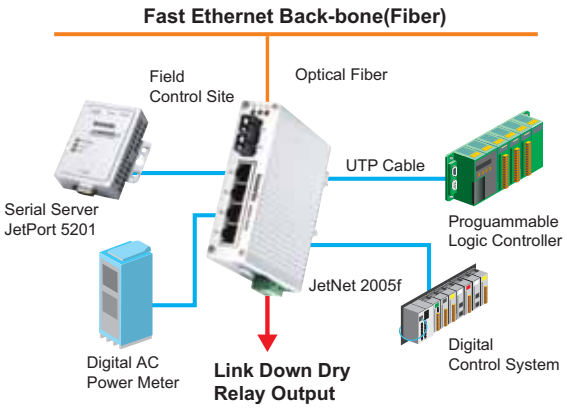
AC 18V~27V or DC 18V~32V is available for different operating environment.

Easy Installation & Brilliant Idea for Hazardous Environment Application

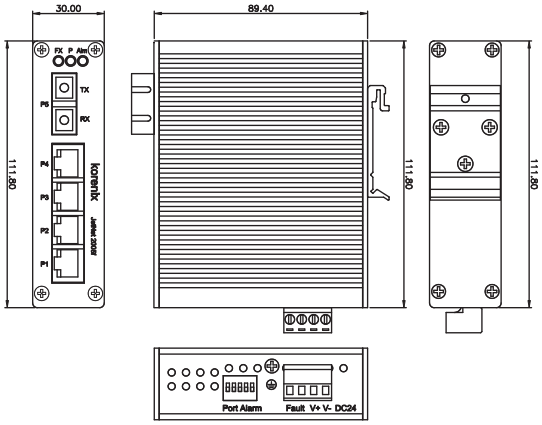
JetNet 2005f series can be easily wall mounted and mounted directly on DIN rail.

The IP31 rigid aluminum flat casing and wide operating temperature range ensure reliable operation in harsh environments. Extended operating temperature range is available for project-based request.

JetNet 2005f Application



Dimensions (Unit –mm)



Specification

Technology

Standard:
IEEE802.3 10Base-T
IEEE802.3u 100Base-TX
IEEE802.3u 100Base-FX
IEEE802.3x flow control
Switch Technology: Store and forward technology and with 3.2Gbps switch fabric
Aggregate System Throughput: 1.49Mpps

Interface

Number of Ports: 4 x 10/100 Base-TX with Auto MDI/MDI-X function, Auto-Negotiation
1 x 100Base-FX supports multi-mode or single mode fiber
Connectors: 10/100 Base-TX: RJ-45
100Base-FX: Duplex SC
Power/Relay: 4-pin terminal block
Cables:
RJ-45 connector: supports CAT-3, CAT-4, CAT-5 unshielded twisted pair or shielded twisted pair cable.
The link distance is maximum 100 meters.
Fiber: SC, multi-mode or single-mode
Multi-mode fiber:
50/125um or 62.5/125um, max. distance 2KM
Single-mode fiber: 8/125um, 9/125um or 10/125 um, max. distance 30KM
Fiber Transceiver: JetNet 2005f-m, multi-mode fiber
Link Distance: 2KM (Max.)
Wave-length: 1310nm
Min Tx Power:-20dBm
Max Tx Power:-14dBm
Min Rx Sensitivity:0dBm
Max Rx Sensitivity:-31dBm
Link budget:11dBm
JetNet 2005f-s, single-mode fiber
Link Distance: 30KM (Max.)
Wave-length:1310nm
Min Tx Power:-15dBm
Max Tx Power:-8dBm
Min Rx Sensitivity:0dBm
Max Rx Sensitivity:-34dBm
Link budget:19dBm
Port Alarm DIP Switch:
DIP 1~5: Enable or disable port link down alarm for RJ-45 port 1~4, Fiber port 5.
On: Enable port link down alarm.
Off: Disable port link down alarm.
Diagnostic LED:
System: Power (green), Fault (red on)
RJ-45 port: 100Mbps Link (green on)/Activity(green flashing)
10Mbps Link (yellow on)/Activity(yellow flashing)

Power Requirements

System Power: 2 pins from 4-pin terminal block for DC or AC power input. DC 18~32V with reverse polarity protection.
AC 18~27V, 47~63Hz
Power Consumption: 4 Watts @ DC 24V

Mechanical

Installation: DIN-Rail mount or Wall Mount
Case: Aluminum case with IP-31 protection
Dimension:
111.8mm(H) x 30mm (W) x 98.2mm (D) (with DIN rail clip)
111.8mm(H) x 30mm (W) x 89mm (D) (without DIN rail clip)
Weight:
377g with package
295g without package

Environmental

Operating Temperature: -10 ~70°C
Operating Humidity: 0% ~ 95%, (non-condensing)
Storage Temperature: -40 ~ 85 °C
Hi-Pot: 1.5KV for all ports and power

Regulatory Approvals

EMI: FCC Class A, CE/EN55022.
EMS:
EN61000-4-2
EN61000-4-3
EN61000-4-4
EN61000-4-5
EN61000-4-6
EN61000-4-8
EN61000-4-11
Safety: CE/EN60950, UL/cUL
Shock: IEC60068-2-27
Vibration: IEC60068-2-6
Free Fall: IEC60068-2-32
MTBF: 713,506 Hours, MIL-HDBK-217F GB standard
Warranty: 5 years

Ordering Information

JetNet 2005f-m Industrial 5-port Compact Ethernet Fiber Switch, 1 SC/Multi-mode, 2KM

Includes:

- JetNet 2005f-m
- Quick Installation Guide

JetNet 2005f-s Industrial 5-port Compact Ethernet Fiber Switch, 1 SC/Single-mode, 30KM

Includes:

- JetNet 2005f-s
- Quick Installation Guide